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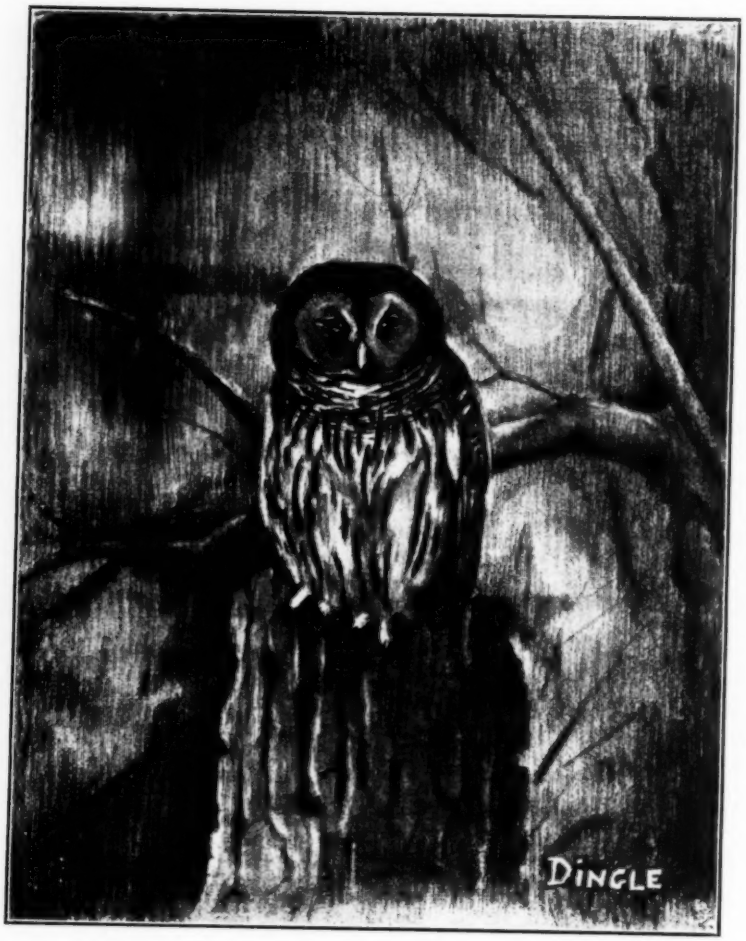

The Barred Owl

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THE WILSON BULLETIN
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THE BARRED OWL (*Strix varia varia*)

BY EDWARD VON S. DINGLE

The Barred Owl (*Strix varia varia*) has been commonly regarded as a lonely bird, restricted to the solitude of gloomy swamps and "untrodden ways"; and so I myself considered it until I came to know it better. Its call—one of the most striking and fear-inspiring of night voices—could well come out of the throat of the Wilderness-Spirit itself; a wild scream, followed by a succession of rapid "whoos" and a final, long-drawn "Aw"—and no wonder the solitary traveler on a moonless night quakes as the echoes sweep through the dark woods. There is endless variation in the cry; sometimes a high "Quak" is rapidly repeated; often a long-drawn "Whoo-aw" is given by one bird and taken up by another; rarely the scream alone is heard. According to the popular belief, this is *the* bird of mystery, together with other members of its family; rarely showing itself by day and then only to be pursued by crowds of jays and other birds and mercilessly driven from tree to tree; but intensely active during the night hours, when it floats about as silently as a wraith and makes its presence known when it sends forth that wild cry. When we rarely glimpse it by electric torch or otherwise, we are greeted by two great black eyes set in a round, human-looking head that continually turns from side to side. Where it places its nest and rears its young we know very little about.

Yet this bird has a sociable side to its nature; and the realization of this fact came as a surprise to me. It is often a town dweller and even occasionally takes up its residence in cities where trees are plentiful. Its two cousins, the Barn Owl (*Tyto alba pratincola*) and the Screech Owl (*Otus asio asio*), likewise, as is well known, live in close proximity to man. *Pratincola* seems to be entirely dependent on church steeples, towers and vacant buildings for its residence, and the little Screech Owl is a bird of rural settlements, preferring hollow trees for its home, but readily taking possession of bird boxes that are large enough to house it.

While residing in Clarendon County of this state, I had good opportunities to observe the ways of the Barred Owl. A number of these big birds lived in a nearby swamp and every evening before dusk several would appear in the grove of laurel oaks that surrounded the house. They soon became partly tame and would often sit on the garden fence, staring at the house and its human inmates. I frequently had both this bird and the Screech Owl fly around me, swooping and snapping their bills, by giving an imitation (such as it was) of their cries. They would become greatly excited, on such occasions, especially *varia*, and frequently brush me with their wings. Persons entering the gate at the head of the grove would sometimes be met by one or more owls and followed to the house; the birds seemed to regard these as intrusions, as they flew from tree to tree, clicking their bills excitedly.

I have never found the nest of this bird nor seen the young, but it probably nests in hollow trees. I have examined a large number of deserted nests of Crows and hawks in hopes of finding them occupied by Barred Owls, but always without success. The Great Horned Owl (*Bubo virginianus virginianus*), on the other hand, does, at least occasionally, take possession of such abandoned nests.

Several Barred Owls live here in the village of Mount Pleasant, and sometimes, especially during cloudy weather, can be heard softly hooting in the moss-draped live oaks. At night they startle us by sending forth their cries from our back yards or roof tops. I have more than once flashed my automobile lights upon them as they perched on fence posts along the streets. Barred Owls have been seen on several occasions in the city of Charleston.

I consider the Barred Owl an entirely beneficial bird, worthy of the strictest protection. Its food seems to consist almost entirely of insects and small rodents; I have never heard of its attacking poultry; nor have I ever seen it prey upon them, although I have raised fowls where this owl was common.

In closing, I will say that I have made no distinction in this article between *Strix varia varia* and *Strix varia alleni*, both of which occur in South Carolina.

Mount Pleasant, S. C.

KANSAS CITY AS A CENTER OF EARLY ORNITHOLOGICAL ACTIVITY IN THE WEST*

BY MYRON H. SWENK

In western North Dakota the Missouri River, flowing eastward, changes its direction to the southeast, and, after maintaining a general southeasterly flow for several hundred miles, across that state and South Dakota, and between the states of Nebraska and Iowa, it again turns sharply to the east, to continue its course for some three hundred miles more across the state of Missouri to its junction with the Mississippi River, a short distance above St. Louis. The Kansas River, traversing the greater part of the state of Kansas from west to east, joins the Missouri River where it makes this sharp eastward turn, and the cities of Kansas City, Missouri, and Kansas City, Kansas, are located at this point, on the south side of the Missouri River and on the east and west sides, respectively, of the Kansas River. It is at this interesting spot that we find ourselves today.

It is not easy for one to comprehend that the first settlements that were destined to develop into this busy western metropolis of three hundred thousand souls had their first beginnings only a little over a century ago, but such is the case. By virtue of its geographical position, the present Kansas City region was in the direct line of white migration to the great Northwest wilderness of the first half of the nineteenth century, and, both by river and by wagon trail, the pioneer settlers of the great Missouri Valley passed through this region. So it came about that the early ornithologists who penetrated into this region, in company with men primarily interested in projects of commercial exchange or military exploration, and who brought back with them upon their return our first knowledge of the birds of the Northwest, so well summarized by Elliott Coues in his book of that title that appeared in 1874, were all more or less identified for a time with the Kansas City region.

When, in 1803, the Louisiana Purchase was consummated, President Thomas Jefferson planned to have this newly acquired territory explored. Accordingly, on May 14, 1804, the famous Lewis and Clark Expedition started by boat up the Missouri River from its mouth, progressing by rowing and towing. By June 25, they had reached the mouth of a large creek called Blue-Water, now known as Big Blue River, which flows through the eastern portions of this city. They

*Read at the Twelfth Annual Meeting of the Wilson Ornithological Club at Kansas City, Missouri, December 28, 1925.

camped for that night on an island in the Missouri River near the mouth of this creek. By the night of June 26 they had reached the point where the Kansas River joins the Missouri, and remained there for two days. On their return down the river, in 1806, they reached this same point again on September 15. Both in ascending and descending the river, they commented upon the abundance of the Wild Turkey in this region.

In the year 1811 two parties ascended the Missouri River, both of which have at least a passing interest for us. John Bradbury, the English botanist, was in 1809 commissioned by the Botanical Society at Liverpool to make researches on the plant life of United States. He reached St. Louis on the last day of December of that year, and when, on March 12, 1811, a party under Wilson Price Hunt started to ascend the Missouri by boat, not only Bradbury, but the American botanist, Thomas Nuttall, then a young man of twenty-five, accompanied the party. They spent April 8 and 9 at Fort Osage (now Sibley), a short distance down the Missouri River from Kansas City, and also in Jackson County, Missouri. About three weeks after the Hunt party had started, that is on April 2, 1811, another party, under the fur-trader Manual Lisa, also started up the Missouri River with the design of overtaking the Hunt party. With Lisa's party was Henry M. Breckenridge, an American traveller and jurist residing at St. Louis. These men, though not ornithologists, have left us some graphic accounts of the Passenger Pigeon, and tell of the nesting of the Canada Goose in this region at that time. They returned down the Missouri River in July, 1811, in the boats of Manual Lisa, reaching Fort Osage on the 27th of that month.

The first competent ornithologist, however, to visit this region, was a man made thus competent by a friendship with no less person than the pioneer American ornithologist Alexander Wilson himself, namely Thomas Say, who was chief zoologist on the Major Stephen H. Long Expedition that was sent out in 1819 to explore the Platte River and the region beyond. This expedition, which started at Pittsburgh, Pennsylvania, on May 5, 1819, in the steamboat "Western Engineer", proceeded down the Ohio River and up the Mississippi River to St. Louis, and thence up the Missouri River. This was the first steamboat to ascend the Missouri River. Say and others left the main party at Fort Osage (Sibley) on August 6, 1819, and proceeded across this county (Jackson) to the Kansas River, and thence northwestward along the south side of the Missouri to a point near to the mouth of the Platte River, where they rejoined the main party on September 15.

Say made some notes on the bird life in this region, noting especially the Raven here for the first time on his trip, and commenting on the Lark Sparrow, which he had met for the first time at Bellefontaine, four miles above the mouth of the Missouri, and which he formally described in 1823.

In 1833 the German ornithologist, Maximilian, Prince von Wied, made his memorable journey up the Missouri River. He left St. Louis on April 10, 1833, on the second trip of the steamer "Yellowstone" up the Missouri, returning in the spring of 1834. His account of this journey, which was published in Coblenz, Germany, in two volumes, the first in 1839 and the second in 1841, teems with references to the bird life observed all along the Missouri River, from its mouth to the terminus of his ascent, at Fort Mandan, North Dakota, and naturally includes references to the bird life of the Kansas City region.

In 1813, seven of the men who had been part of the Wilson Price Hunt party that had left St. Louis on March 12, 1811, to ascend the Missouri River to Fort Pierre (South Dakota), and thence travel overland through the Black Hills and Big Horn Mountains to found Astoria at the mouth of the Columbia River, returned down the North Platte and Platte River Valleys, seven years before the Platte Valley was again traversed by the Major Long expedition. Seventeen years later, in the spring of 1830, a party under Milton Sublette left Independence, just to the east of Kansas City, which was then the outpost of white civilization, to trade for furs in the Northwest country. They followed the path that shortly after was to form the historic Oregon Trail, and, reaching the Wind River Mountains of Wyoming in the middle of July, they returned the same summer by the same route bringing their ten wagons well laden with furs.

Two years later, Captain Nathaniel J. Wyeth and Milton Sublette led a party that followed the same trail, not only to Wyoming but through the South Pass in the Rocky Mountains and on to Oregon, thus blazing the Oregon Trail in its entirety. In 1834, Captain Wyeth led a second party over this trail, and this time two ornithologists were included in it, Thomas Nuttall and the twenty-five year old Philadelphian John K. Townsend. Captain Wyeth had left St. Louis on March 7, 1834, and was joined by Nuttall and Townsend at Booneville, Missouri. The caravan left Independence on April 28, 1834, and shortly after their start the Harris's Sparrow was first discovered by Nuttall, probably somewhere within the present city limits of Kansas City. The same bird was also discovered by Maximilian near Bellevue,

above Omaha, Nebraska, fifteen days later (on May 13) on his return trip down the Missouri.

In 1842 the first expedition to the Rocky Mountains under Captain J. C. Fremont, left St. Louis on May 22, proceeding up the Missouri River to near the mouth of the Kansas River, where the expedition completed outfitting and started on June 10, following the Oregon Trail. In 1843 Captain Fremont's second expedition left Kansas City on May 29 and proceded up the valley of the Kansas River. Unfortunately, there was no ornithologist with either of the Fremont expeditions, and they added very little to our knowledge of the bird life of this region.

But in the latter year, 1843, the famous ornithologist John J. Audubon ascended the Missouri River to Fort Union, and his journal of this Missouri River trip was published in 1897. With Audubon were his patron Edward Harris and the taxidermist J. G. Bell. They passed the Kansas City region on May 2, 1843, reaching Fort Leavenworth the next day, and returned by this region about the middle of October of the same year. Near Fort Leavenworth on May 4 Harris also discovered the sparrow which bears his name, and a little farther up the river the party discovered another characteristic Missouri Valley bird, the Bell's Vireo. Concerning the Kansas City region Audubon refers to the presence of such now extirpated species as the Wild Turkey, the Ruffed Grouse, and the Carolina Paroquet, and also mentions nesting Bald Eagles.

In 1846 Lieutenant J. W. Abert led a military party from Fort Leavenworth over the Santa Fe trail, passing through what is now Kansas City, and in 1882 published a list of the species he had observed between Fort Leavenworth and Santa Fe.

During the 50's we find several ornithologists, of a somewhat later generation than that to which Say, Nuttall, Townsend, Maximilian, and Audubon belonged, continuing the activity in this region. In 1854, P. R. Hoy collected numerous birds in the vicinity of Kansas City, among which was a specimen of the Purple Sandpiper, a bird that has not since been recorded from here. Lieutenant Couch in this year also forwarded to Professor S. F. Baird at Washington specimens from this region for use in his great work in 1858. In 1856, F. V. Hayden accompanied the first Lieutenant G. K. Warren expedition, which started from St. Louis up the Missouri River for Fort Pierre on April 16, with Dr. Hayden collecting specimens near Fort Leavenworth on April 21 and elsewhere along the way, whenever opportunity afforded. In the same year the United States War Department sent an expedition

under Lieutenant F. T. Bryan to survey a route for a wagon road from Fort Riley, Kansas, to Bridger's Pass, Wyoming, and this expedition was accompanied by Mr. Wm. S. Wood of Philadelphia, who made large collections of birds, not only in the vicinity of Fort Riley, from June 13 to 20, but along the route through Kansas, Nebraska, Wyoming, and Colorado, until late in October of that year. The following year Mr. Wood again collected birds around St. Louis from May 6 to 15 and around Fort Riley until the departure of the party, about June 12, these being supplemented by further collecting in Nebraska and Wyoming until early September of 1857. But yet more important, from the local standpoint, were the collections of Dr. J. G. Cooper, who in 1857 collected birds at Independence, Missouri, and vicinity, from May 26 to July 1, at Shawnee Mission, Kansas, on July 3 and 4, and at Fort Leavenworth on July 12 and 13, as a member of the W. M. Magraw party.

During the 70's ornithologists working in this region included the late Dr. J. A. Allen, who during the first ten days of May, 1871, collected birds at Fort Leavenworth and vicinity, and W. E. D. Scott who observed and collected birds in the adjacent county to this one, Johnson County, in the spring of 1874. With the appearance of Coues' "Birds of the Northwest", in 1874, the pioneer period in Missouri River ornithology may be fittingly considered as having been brought to a close.

We assemble today, therefore, on grounds that were not unfamiliar to many of the great ornithologists of the nineteenth century, and it is fitting that we should realize this fact as we meet to carry forward the standard of ornithological progress that they have dropped.

University of Nebraska,
Lincoln, Nebraska.

IN SEARCH OF NEW COLONIES OF KIRTLAND WARBLERS

BY NORMAN A. WOOD

Early in the morning of June 12, 1925, the writer in company with Mr. Walter Hastings, Custodian of Oology in the Museum of Zoology, started from Ann Arbor for north central Michigan in an automobile loaded with tents, air mattress, blankets and three cameras. The object of the trip was to find nests of Kirtland Warblers (*Dendroica kirtlandi*) in order to study and photograph the birds at home.

Our first stop was in Clare County, where we hoped to locate the colonies found by the late Dr. W. B. Barrows. We drove for an entire day but found no Kirtland Warblers. We were told that large tracts

of small jack pine in the northwest corner of the county had been destroyed by fire. These areas were, no doubt, the sites of the colonies Barrows found.

We then drove into Roscommon County where we found a small colony and heard the males singing by the side of the road. We spent some time there but soon found the birds were not yet nesting and were scattered all over the tract of jack pines.

From here we drove north and east into Oscoda County where we located several colonies. One of these was the largest we had ever seen, and was possibly the largest in the state. We estimated that it occupied an area over a mile square or more than 1,000 acres. Here we found the conditions ideal for the species, with jack pines from three to ten feet high, in places very thick, in others more open. The birds were flying about, singing and mating and we soon decided we were too early for the nests.

Leaving this colony we drove west into Crawford County where in one day we found several colonies, some of them many miles apart. We stopped at the site of one colony where Mr. and Mrs. Hastings had camped in June, 1924. They had heard the birds singing all about the camp in early morning and counted eight or ten in sight or hearing at one time. Here Mr. Hastings had been able to get good photographs of several birds which acted as though the nests were close at hand, although none were found. We also found a few of the birds but they were rather shy and we decided that on account of the cold late Spring they had not yet nested. We found here a nest and young of the Slate-colored Junco which Mr. Hastings photographed.

Another day we drove over the jack pine plains of Crawford County and found the species quite common in nearly all suitable habitats. We also found large tracts that had burned over. Fire is without doubt the greatest menace to the Kirtland Warbler colonies, since it destroys the habitat as well as the nests of the birds. Mr. Babbit, the Fire Warden at Grayling, told us that fire had run over about 70,000 acres in Crawford and Oscoda Counties early in 1925. This was no doubt before the warblers arrived. The Cowbird probably destroys large numbers of eggs—but is not so serious a problem for the warbler as fire.

We spent seven days driving over the plains, in all about 700 miles, and located many colonies of the species. It is difficult to locate the boundaries of some of these as they merge into one another. Some of these colonies are on open, burned over plains while others are in thicker growths but all are in burned over areas. There is no limit

to the suitable habitats at present, although in the future when the jack pines are older, they may become limited as the ground cover which is essential to the nesting of the species is destroyed by the shade and the needles of the older jack pines. Then too, the lower limbs die and drop off, as the pines mature, and this species is a lover of thick low branches.

The male does not help in the nest building, Mr. Parmelee says, but "just sits around and sings" and after the nest is built and occupied, the male usually sings from some more or less elevated perch near by, while the female is seldom seen above the lower levels of the small jack pine, which furnish them with food and cover. In 1925, however, many of the males were singing low down and some even on the ground.

In conclusion, I wish to correct the type set record that Mr. Edward Arnold claims was taken by him, June 15, 1904. (Bulletin of Mich. Orn. Club, Vol. V, No. 8, pp. 67-68). I collected the type egg on July 11, 1903, with the first nest and its two juvenile birds, all of which are now in the collection of the Museum of Zoology. At my request, Mr. James Parmelee who was with me in 1903, collected a nest and eggs on June 6, 1904, near the site of nest 1, Frazer's, Oscoda County. This set with its nest was sent to the American Museum of New York City by myself and is no doubt now in that collection. These so far as known were the first nests and sets ever taken, but Mr. Parmelee found three other nests all with young at that date.

These are very early dates for young as most of the nests recorded have been later. Mr. Parmelee in his letters to me says that the earliest males arrived at his place on May 3, 1904, and some lingered until September 8. In letters to me Dr. R. A. Brown tells of his visit to Frazers' in June, 1904, and of finding four nests all with young, before June 25. He tells of finding eighteen males in four hours. This is the same colony in which I found the first two nests on July 8-9, 1903. Now the trees are too old and the warblers have gone to other and smaller pines. In June, 1922, this region was worked by Leopold who did not find this species, and who gives the same probable reason. (*Auk*. XLI—1924. Jan. p. 34).

In all the colonies we visited we found about the same number of birds per acre, a conservative estimate of one pair per acre, which for all the known colonies gives us a total of perhaps 5,000 or 6,000 pairs; and there are no doubt many small colonies not yet known.

Museum of Zoology, University of Michigan,
Ann Arbor, Michigan.

A HOUSE WREN STUDY

BY MRS. MARIE DALES

When we moved to our new home, I was uprooted from nineteen years of residence in one place. I felt strange and lonely. I wondered if this house would ever be home to me. As a panacea for this strangeness and loneliness I turned to my neighbors, the birds, for comfort. I soon became deeply interested in their affairs, part of the time more interested than I was in my own. I had a new house, I wanted the birds to have new houses, too. It was getting late in the spring, the lawn had not been leveled off, the clothes posts were not in, all about was confusion, there really seemed to be no great inducement to the birds to come, no really good places for houses, however I very laboriously fashioned one out of a very small cigar box, which I suspended in one of the two trees our front lawn afforded, never dreaming it would have an occupant. It was not long until Father House Wren spied it, and straightway began to furnish the house. He carried sticks and sang, all by himself, for several days.

One morning I chanced to be looking out, and saw him in company with a female in a small elm near the back door. It was too funny to see him lead her to the top of the tree which contained the little house and hop down, branch by branch, until he brought her to the door. His attitude seemed to say, "See what a beautiful home I have to offer." She took one look in through the door, flirted her tail as much as to say, "No love in a cottage for me," and away she flew. A few days more of building and singing, when, lo! he had found a mate, and home-making began in earnest. I spent many pleasant moments watching their family life, particularly since there were no other birds on the place. When it came time for the brood to leave the nest, I was fortunate in seeing them as they emerged, and was utterly astounded to see six little birds hop out. It is a mystery to me how they were ever reared to maturity in so small a box. The next day Father Wren began to clean house. I saw that without help it was going to be a long process, so I lent my assistance. A new nest was built and a second brood reared. I missed seeing the departure of any but the last two young birds. The last one was too cowardly to leave the nest until hunger drove him out the next morning. I now fashioned another house, a crude affair to be sure, which I placed on a low pole in a clump of lilacs, within easy reach, affording an opportunity for closer study. Father Wren was delighted with this more commodious house, and began building right off. Thus placing an option on it for occupancy the following spring.

Up to this time my bird studying had been along popular lines, books written to appeal to the uninitiated. Ornithology was rather a terrifying word, and Ornithological Magazines, obviously, were only for those more learned than I, on the subject. So I was rather unprepared for the damaging accusations against my little neighbor. My mind was open to conviction, however, and the following spring found me studying the wrens with an idea of finding out if these things were really true.

We now have a martin house, three bluebird boxes, and another wren box. By furnishing food, water and nesting material many birds found inducements to nest in close proximity; Catbirds, Brown Thrashers, Yellow Warblers and Goldfinches nested in surrounding shrubs, while one pair of Bluebirds and two pairs of Purple Martins occupied houses.

A pair of Catbirds shared the same clump of lilacs with (as I like to think) the same pair of wrens that nested on the place the year before. The Catbird nest was within eight feet of the wren box. When there were four eggs in the nest, so placed that I could look into it without making any disturbance, a severe windstorm loosened the nest from its moorings and spilled the eggs. The Catbirds immediately set about and built another nest in the same clump, laid five eggs and reared five young. I never once saw the wren disturb the Catbird's nest. The pair of wrens reared a brood of five. The parents and one of the brood were banded, the rest got away. Whether the female left him or met a tragic death I never knew. The male remained mateless the rest of the season. Another pair of wrens came late and took possession of a box on a window casing. They reared a brood of five. The parents and four of the brood were banded. In all nine wrens were banded that year (1924). This wren box was about twenty feet from the bluebird and martin houses. The Bluebirds reared two broods of four birds each. I could not determine how many broods were reared by the martins. I never saw the wrens disturb any of these nests, nor did the bluebirds or martins show any animosity toward the wrens.

The following spring (1925) not a banded wren came back to its former nesting place, nor did I see one anywhere in the locality. Those that came and took possession of the boxes were veritable imps of destruction. Shortly before their coming, I put up two Robin nest shelves, one on the north under the porch eaves, the other on the south side under the garage eave. I was so delighted when I discovered a pair of Robins building in the north side nest shelf. I gave all the

assistance I could, by furnishing rags, string and a panful of mud. Before the nest was quite finished, I happened around the corner one morning, and saw a wren viciously tearing the nest to pieces. I never dreamed so small a bundle of feathers could show such fury. Of course that settled this nest. The Robins abandoned it. My neighbor had two nest shelves, both occupied by Robins, both nests contained eggs; these were thrown out by the wrens. Both nests were abandoned. The Robins became discouraged, and made no further attempts to nest, either in my yard or that of my neighbor. The year before five nests were distributed over this area. On the afternoon of June 28 I saw a wren enter the bluebird box containing two young birds, one day old. I fully intended to go out and investigate this visit of the wren, but some duty or other called me away and I did not think of it again until I observed the dejected appearance of the Bluebirds the next morning. I opened the box and saw one dead nestling. Whether the wren came back and threw out the second bird, or the parent Bluebirds removed it from the nest, I will never know. This wanton killing was the last straw. Down came the wren boxes!

One pair went across the drive and took possession of a bluebird box in the yard of my more indulgent neighbor, where they reared one brood. My Bluebirds took after them every opportunity they had. One day I saw Father Bluebird have a wren by the nape of the neck administering a well deserved punishment.

I chanced to be looking as this brood of wrens were about to leave the nest. I walked up to the box which was within easy reach. I stifled my desire to wring their necks, and gave my curiosity full sway, I wanted to see if my standing there would frighten them. They showed no fear of me at all, not even when I stroked the head of one of the nestlings. Two left the nest while I stood there. Had the parent birds been about I imagine they would have been told there was great danger nigh.

Sioux City, Iowa.

BIRDS OF THE RED RIVER VALLEY OF NORTHEASTERN NORTH DAKOTA

BY H. V. WILLIAMS

In writing up the list of birds of this region I wish to first bring to the attention of the reader a few facts of a general nature. My father, W. H. Williams, came to this state in 1882, and settled on what was known as the Big Slough, between Glasston and Bowesmont. It extended from a few miles south of St. Thomas, and the over-flow emptied into the Tongue River near Neche. It varied from a hundred yards in width to a mile in places, and contained a rank growth of coarse slough grass; in the deeper water cattails and other tall rushes grew. There was a channel through the center, with large patches of open water here and there.

This proved to be a veritable paradise for game, and it was also in the line of migration of water fowl both spring and fall. There was no timber in the immediate vicinity, so that woodland birds were seldom seen.

My father, being an ardent bird student, had ample opportunity to study the bird life of that region; and, being a taxidermist, he collected and mounted many of the birds which he found. In 1899 he moved to Grafton where he opened a taxidermy shop. He collected and mounted birds here until about 1910, when I started to do the collecting and he took care of the shop work. No definite records or data were kept until 1900. Notations as to abundance previous to this time are made from memory. I have used my father's records up to 1910 and 1912, while after that time they are from my own collecting and observations.

The present paper is based upon records of specimens taken within a rather limited area, especially from 1900 onward; such an area may be said to be included in a circle made by a twenty mile radius from Grafton as a center. But I believe the list includes practically every species that may be found anywhere in the Red River Valley of North Dakota. I have included no records of specimens taken outside of the Valley proper. It was in 1900 that my father began building up a collection of local birds, and more accurate data were kept from this time on. The bulk of this collection is now in the Biological Station at Devils Lake, North Dakota, having been placed there in 1924.

These specimens have been collected in the following localities: in the Big Slough; on the Park River, a tributary of the Red, which passes through Grafton, and is bordered by a narrow fringe of timber;

on Salt Lake and North Salt Lake, two alkali lakes near here; on Minto Lake, about fourteen miles south of us: and on the Red River itself, although very little work has been done on the Red River proper.

I have spent fifteen years working in this one locality and believe that I have taken about every species that occurs here, and also a number of stragglers that have come through.

[The following list contains 267 named forms.—Ed.]

Western Grebe—*Aechmophorus occidentalis.* I have no exact date for this record, but a bird was caught alive and brought to W. H. Williams to be mounted, in the early part of May, 1910. It had alighted on a patch of ice and could not get up again. Have not seen or taken one here since, so it must be considered a rare straggler this far east.

Horned Grebe—*Colymbus auritus.* A common resident of our sloughs and ponds, nesting in this locality frequently. A specimen in our collection dated Grafton, May 4, 1918. Earliest arrival, April 15. Bred in countless numbers on the big sloughs in Pembina County in large colonies from 1882, when first observed, until the time the slough was drained, about 1910.

Eared Grebe—*Colymbus nigricollis californicus.* A frequent visitor during spring and fall migrations, but I do not believe they nest in this locality. Record: Grafton, May 10, 1912. Earliest arrival, April 30. Never were very plentiful in this part of the State even back in the early eighties.

Pied-billed Grebe—*Podilymbus podiceps.* A common visitor during migrations both spring and fall, with an occasional pair nesting here. A specimen in the collection dated June 2, 1920. Earliest arrival, April 14. A quite common resident in the big slough and small lakes as far back as 1882.

Loon—*Gavia immer.* A fairly common visitor in both spring and fall migrations, but none stop to nest in the immediate vicinity. A mounted specimen dated Grafton, April 23, 1921. One killed October 2, 1923. Earliest arrival, April 16. The loons never were plentiful in this district. Never known to breed here even in the early days.

Herring Gull—*Larus argentatus.* A rather common migrant both spring and fall. No birds breed in this locality. A mounted specimen in our collection dated Grafton, April 24, 1923. Earliest arrival, April 6. Very common spring migrants; most commonly seen flying against a strong north wind; none nested, 1882.

Ring-billed Gull—*Larus delawarensis.* A common migrant in spring and fall, and I have seen birds during breeding season although no nests have been located yet. A mounted specimen dated Grafton, April 29, 1923. Earliest arrival, April 4. A common migrant back in 1882, but none nested.

Franklin's Gull—*Larus franklini.* A very common migrant both spring and fall. I have seen flocks of several hundred leaving a lake at one time to feed, or resting on the water in a great raft. Have a specimen dated Grafton, May 1, 1922. Earliest arrival, April 22. Migrated in countless numbers as far back as 1882, but none nested.

Forster's Tern—*Sterna forsteri.* Not a common migrant although in some years they are more plentiful than in others. Have a specimen dated Grafton, May 3, 1923. Earliest arrival, May 3. Very common breeder in 1882-1910 on the big sloughs.

Black Tern—*Chlidonias nigra surinamensis.* A very common migrant and summer resident, being found in almost every slough or body of water where they nest. Have a mounted specimen dated Grafton, July 8, 1923. Earliest arrival April 28. Nested in great colonies from 1882 until the big slough was drained.

Gannet—*Moris bassana.* W. H. Williams shot and wounded a bird that got away from him, and which he identified as a Gannet, early in the spring of 1882. He was close enough to get a good view of the bird and the description tallies exactly with the specimen.

Double-crested Cormorant — *Phalacrocorax auritus auritus.* A common migrant in spring and fall, being seen in flocks, from six to fifty birds. None nest here. Records: Grafton, May 9 and May 21, 1924. Mounted bird, Grafton, April 26, 1921. Earliest arrival, April 24. About as plentiful as a migrant in 1882 as today. None nested.

White Pelican—*Pelecanus erythrorhynchos.* A fairly common migrant a few years ago, but very few have been seen in the last four or five years. Record: mounted specimen, Grafton, May 15, 1904. A common migrant on the big slough, but it very seldom stopped there. One killed in 1882. About as common today as then.

American Merganser—*Mergus americanus.* A rare spring migrant but more plentiful in the fall. None nest here. Records: mounted specimen, Minto, April 16, 1904; Grafton, May 21, 1924. Earliest arrival, April 18. Not a common migrant and none nested back as far as 1882.

Red-breasted Merganser—*Mergus serrator.* A rare migrant in this locality, both spring and fall. Sometimes several years will elapse

between appearances. Have a mounted specimen dated Grafton, April 27, 1924. Earliest arrival, April 8. Very rare on the big slough in the early days.

Hooded Merganser — *Lophodytes cucullatus.* Cannot be called common; in fact they are almost rare now, although I have found them during the nesting season, so presume they nest along our stream. A mounted bird dated Grafton, May 4, 1917. Earliest arrival, May 2. Rare migrant in the valley as far back as 1882.

Mallard—*Anas platyrhynchos.* A very common migrant and resident, arriving early in the spring and staying as long as open water is to be found. I have killed them here after January 1, in an open hole in the river. They were very thin and small although well colored. A mounted specimen dated Grafton, October 16, 1911. Earliest arrival, March 25. Nested in great numbers throughout the region and migrated in countless thousands throughout the eighties. Nested everywhere.

Black Duck—*Anas rubripes.* A rare duck in this locality, as very few have been taken. Have a mounted specimen dated Grafton, April 10, 1909. Two were seen September 1, 1924. Earliest arrival, April 10. Very rare in the eighties on the big slough. Probably more common now than at that time.

Gadwall — *Chaulelasmus streperus.* A fairly common resident, nesting near sloughs and lakes. Record: mounted specimen Grafton, April 20, 1903. Earliest arrival, April 20. Very common breeder throughout the district in the eighties, and nested quite commonly.

Baldpate—*Mareca americana.* Considered a fairly common migrant, although not nesting here except rarely. Record: mounted specimen October 29, 1912. Earliest arrival April 18. Also a common breeder in the eighties.

Green-winged Teal — *Nettion carolinense.* A common resident through the breeding season. A mounted specimen dated Grafton, May 4, 1910. Earliest arrival, April 19. Considered quite rare throughout the big slough in the eighties, although some nested.

Blue-winged Teal—*Querquedula discors.* One of the most common breeding ducks in this vicinity. Nearly every little slough has its pair of these birds and the early fall shooting consists mostly of this variety. Have a mounted specimen dated Grafton, April 1, 1912. Earliest arrival, April 1. Nested in countless thousands in and around the big slough in the eighties.

Shoveller—*Spatula clypeata.* The Shoveller must also be considered one of our common summer residents, nesting in quite large numbers. Have a mounted bird dated April 13, 1912. Earliest arrival, April 13. Also very plentiful and nested in large numbers in every little pond or slough throughout this district in the eighties.

Pintail—*Dafila acuta.* I believe the Pintail can be called the most common nesting duck in this locality. Being a typical prairie bird, it finds its typical habitat here in the valley. There are more Pintails shot in the early season than any other variety. My records show one dated Grafton, April 20, 1903. Earliest arrival, March 25. Very common, as was the Shoveller, in the early eighties.

Wood Duck—*Aix sponsa.* This beautiful duck is becoming rarer every year, and it has been several years since I have taken or seen one of these gorgeous birds in this vicinity. I never knew them to nest here and only found them during spring and fall migrations. Have a mounted bird dated Grafton, May 8, 1908. Earliest arrival, May 8. A very common breeder along the small streams in the eighties.

Redhead—*Marila americana.* A very common duck during the migrations, being found on deep water lakes in large numbers. A few remain to nest but are not at all plentiful. A record from the collection dated Grafton, April 25, 1924. Earliest arrival, April 18. Very common from 1882 until the slough was drained.

Canvas-back—*Marila valisineria.* Another very common migrant both spring and fall, with a few remaining to nest, as with the Redheads. The most highly prized duck shot, but in this locality which lacks the celery beds, I think the difference is mostly imagined. I have a mounted bird dated Grafton, April 26, 1902. Earliest arrival, April 18. Considered rare and not found nesting on the big slough. An occasional bird killed among migrants in the early eighties.

Scaup Duck—*Marila marila.* A rare visitant at this locality and only in the spring have I seen them. Have a mounted bird dated Grafton, April 15, 1909. Earliest arrival, April 15. Not plentiful and not known to breed in the big slough in the eighties.

Lesser Scaup Duck—*Marila affinis.* A common migrant in spring and fall and also quite a number nest in the small lakes near here. A mounted bird dated May 10, 1913. Earliest arrival, April 16. More common among migrators than the former but none seemed to stay to breed on the slough in the eighties.

Ring-necked Duck—*Marila collaris.* A few years ago this was considered a rare bird, but in the last few years they have become

quite numerous in spring and fall migrations, especially in the fall. My first record is from a mounted bird dated Minto, April 20, 1903-October 20, 1923. Earliest arrival, April 20. Very rare in the eighties. They seem to be more plentiful now.

Golden-eye—*Glaucionetta clangula americana.* A rare migrant both spring and fall, not over a dozen birds being seen in any season. Have a mounted bird dated Grafton, April 8, 1910. Earliest arrival, April 8. Rare on the slough in the eighties and not common now.

Barrow's Golden-eye—*Glaucionetta islandica.* This record I got from a young bird student, Don Loos, who said he picked up a partly decayed duck that resembled a Golden-eye except for the white crescent at the base of the bill instead of the round spot. This white crescent is what attracted his attention, as he had seen the other Golden-eye and noticed a difference. This bird was found at Minto Lake in the early part of October, 1922.

Buffle-head—*Charitonetta albeola.* Cannot be called a common migrant in the spring, but is quite common in the fall flight. I have one killed at Grafton, April 14, 1903. Earliest arrival, April 14. A rare migrant in the eighties. More common now.

White-winged Scoter—*Oidemia deglandi.* A rare migrant in the fall and very rarely ever seen in the spring. I have a record of one killed September 30, 1920. Earliest arrival May 10. A rare migrant in the eighties.

Ruddy Duck—*Erismatura jamaicensis.* An uncommon migrant in the fall flight. A few are taken every fall but never saw one here in the spring. I have record of two dated Grafton, October 11, 1924. Common breeder in this district in the early days. Not known to nest here now.

Snow Goose—*Chen hyperboreus hyperboreus.* Quite a common migrant. Usually seen flying with the flocks of Blue Geese in the spring and fall. Very seldom seen in flocks by themselves. Have one mounted that is dated Grafton, May 7, 1922. Earliest arrival, April 2. A common migrant in the eighties. None nested.

Greater Snow Goose — *Chen hyperboreus nivalis.* Probably as common a migrant as the Lesser Snow Goose, flying in company with the Blue Geese and Lesser Snow Geese. Our migrations of geese seem to be decreasing each year and the flight is moving west. About fifteen years ago I have seen countless thousands of geese in flight and whole quarter sections of plowing that appeared covered as with snow. Have

one dated Grafton, April 13, 1907. Earliest arrival, April 13. Very few nested in the early eighties.

Blue Goose—*Chen caerulescens.* This is the most common migrant of the smaller geese in this locality, flying in flocks from fifty to three hundred, but always with a few Snow Geese mingled in the flocks. These birds did not appear in any great numbers that I noticed until about 1906. Have one of the first ones brought to my attention dated Grafton, March 30, 1906. Earliest arrival, March 30. Not fully recognized until after 1900, although the flocks of Snow Geese of early days contained large numbers of dark colored and indiscriminately spotted and mottled birds that were not true Blue Geese.

White-fronted Goose—*Anser albifrons gambeli.* I would consider this a rare migrant, having seen very few during migrations at any time. They usually fly alone and not mixed with other geese. Have one dated Grafton, April 8, 1908. Earliest arrival, April 8. Quite rare in the eighties. Began to increase in numbers about 1896.

Canada Goose—*Branta canadensis canadensis.* Probably the most common and most sought for goose we have today. The height of every yonug hunter's ambition is to kill a "Honker". They are very common here during migrations, both spring and fall, but none have been known to nest here in the late years. Have a mounted one dated Glasston, April 18, 1906. Earliest arrival March 12. The Canada Goose nested in large numbers up to 1886 when they started to diminish as the country settled up. As the settlers move in the "Honkers" move to less settled districts.

Hutchin's Goose—*Branta canadensis hutchinsi.* Likely as common a migrant as the true Canada Goose and often mistaken for that bird. I have a record of one dated Grafton, April 8, 1922. Earliest arrival, April 8. Rare in the eighties, as practically all were the big Canada Geese.

Cackling Goose—*Branta canadensis minima.* A rare migrant at any time. Can remember of only one being killed here about the year 1905. No record of any since. Also rare until about 1898 when they started to appear.

Whistling Swan—*Cygnus columbianus.* A few swans are usually seen in every spring migration, ranging in numbers from three to fifty birds in a flock, but scarcely more than two or three flocks in a season. Have a record of two killed April 10, 1919, at Grafton. Earliest arrival, April 3. Very rare throughout the eighties, and in fact until 1900.

Wood Ibis — *Mycteria americana.* A straggler was killed and mounted from Glasston, North Dakota, in the spring of 1900.

Bittern — *Botaurus lentiginosus.* A very common bird in our sloughs and lakes nesting in numbers wherever favorable nesting ground is available. Have a mounted bird dated Grafton, October 27, 1920. Earliest arrival, April 23. Nested in exceedingly large numbers on the big slough and all other suitable places from 1882.

Least Bittern—*Ixobrychus exilis.* This bird must be considered a straggler in this district. I have no definite record, but W. H. Williams reports seeing one in the late eighties at Glasston, North Dakota. The second known record for this region is an adult male seen at Grafton, August 4, 1925.

Great Blue Heron—*Ardea herodias herodias.* A rare migrant in the spring, but fairly common in fall migrations along our streams and lakes. It appears early in the fall, usually the adult and young, but I do not know of them nesting. Have a record of one dated Grafton, August 13, 1912. Earliest arrival, April 27. Not found in the big slough but fairly common along the Red River and its tributaries from 1882 on.

Green Heron — *Butorides virescens.* Another bird that is undoubtedly a straggler. I had one reported in June, 1917, along the river here but could not locate it, but am sure of the record from the description. Have a mounted one taken at Glasston, May 2, 1905. A rare straggler at all times.

Black-crowned Night Heron—*Nycticorax nycticorax naevius.* An uncommon migrant in the spring but more common in the fall. I am sure of a small colony nesting near Minto, North Dakota, but have not located it as yet. Have a record dated Grafton, September 16, 1922. A few were usually seen every season throughout the eighties, and later.

Whooping Crane—*Grus americana.* A rare migrant now that used to be quite common in the early eighties. At the present rate of decrease it looks as if this great bird is to follow the Passenger Pigeon from its old haunts. W. H. Williams killed one at Glasston in April, 1899, and there is a record of one killed April 12, 1912. Five birds were seen near here in April, 1923. Earliest arrival, April 12. A few were seen every year until about 1900. One was killed by W. H. Williams on the big slough in 1899.

Little Brown Crane—*Grus canadensis.* A rare straggler through here. Have one record dated Grafton, September 30, 1920. None were taken on the big slough from 1882 on.

Sandhill Crane—*Grus mexicana.* At one time this was a common migrant and breeder on the prairies of this locality, but of late it has become very rare. The only one I ever saw stop here was on April 23, 1924. It was alone and allowed me to approach within fifty yards before it showed any signs of uneasiness. It remained around this locality about a week before it disappeared. It was very plentiful in the early eighties and nested in the big slough up to 1884. A large colony of eight or ten was found in a small slough in 1883.

Virginia Rail—*Rallus virginianus.* Not a common resident of our sloughs and marshes, but an occasional bird can be seen, especially in the spring migration. Am not sure that they nest here, but believe so. Have one record dated Grafton, June 3, 1910; and two killed May 23, 1923. Earliest arrival about April 30. Not plentiful in the big slough; found only occasionally in the early eighties.

Sora Rail—*Porzana carolina.* A very common migrant and also resident of our sloughs and marshes. A great little bird to run rather than fly, and in darting through the grass it gives one the impression that it is running on the water when in fact it steps from blade to blade of grass or any little obstruction available. Have a specimen dated Grafton, April 28. Earliest arrival, April 23. Very plentiful at all times up to the drainage of the big slough. Still plentiful in smaller sloughs.

Yellow Rail—*Coturnicops noveboracensis.* A rare straggler and I have no definite record except one that was killed at Glasston, North Dakota, in 1882, by W. H. Williams. This was the only bird ever taken in this region.

Coot—*Fulica americana.* A very common migrant and breeder in this locality, being found nesting in large numbers in sloughs and marshes. Have one mounted that was killed at Grafton, May 8, 1924. Earliest arrival, April 26. Exceedingly numerous in 1882 in the big slough, breeding there in great numbers.

Northern Phalarope—*Lobipes lobatus.* A rather common migrant in both spring and fall, although they do not nest here. Have seen large numbers of them with other small shore birds busily feeding on the edge of a small lake. They are good swimmers and sometimes will be seen quite a distance from shore. My records show one dated Grafton, May 20, 1913, and six killed August 4, 1923. Earliest arrival, May 14. Very plentiful from 1882 until the drainage of the big slough.

Wilson's Phalarope—*Steganopus tricolor.* A common breeder in this district, being found in sloughs where there is some open water

available. Nests are placed on dry land a short distance from the water. The female, as in the other phalaropes, carries the bright colors, while the male incubates the eggs and seems to care for the young. Have one killed at Grafton, May 4, 1910. Earliest arrival, May 4. Very plentiful from 1882 on.

Black-necked Stilt—*Himantopus mexicanus.* A very rare straggler. I saw one bird during the spring migration of 1905. It flew past me quite close and from the markings, which were very distinct, there was no chance of mistaking it.

Wilson's Snipe—*Gallinago delicata.* A common migrant in spring and fall in this locality, but now they are not noticed during breeding season. Have one mounted dated Grafton, May 3, 1904. Earliest arrival, April 19. Bred in large numbers from 1882 on.

Long-billed Dowitcher—*Lymnodromus griscus scolopaceus.* This species can be called common during both spring and fall migrations, and is easily distinguished by its long bill and habits so different from the Wilson Snipe, the only bird with which it might be confused. They were very common in the spring of 1925 during migration, about May 16. Have records of birds taken May 16, July 8, August 14, and September 9, all in 1923. A mounted bird dated Grafton, May 2, 1902. Earliest arrival, May 2. Not common in the early days, but apparently more common now.

Stilt Sandpiper—*Micropalama himantopus.* A very common migrant, especially in the spring. On May 29, 1924, I saw a flock of between 200 and 250 stilts in one flock. I have records of birds taken July 14, August 4, and August 18, 1923, and May 29, 1924, at Grafton. Earliest arrival, May 28. They were not common anywhere here in the eighties, but a few seen during migration.

Knot—*Calidris canutus.* A rare migrant in this locality. Have taken very few of these birds. I have the following records of birds taken: August 18, 1923, and August 25, 1923, at Grafton. Earliest fall arrival, August 18.

Pectoral Sandpiper—*Pisobia maculata.* Another common migrant in our locality. I have the following records: May 17, 1909; May 16, 1923; September 16, 1917, and May 18, 1924, at Grafton. Earliest arrival, May 16. Fairly common in the early eighties, and quite common now.

Baird's Sandpiper—*Pisobia bairdi.* One of the most common migrants in this district, especially in the spring. Have a mounted bird dated Grafton, June 3, 1919. Common in the eighties.

Least Sandpiper—*Pisobia minutilla.* A very common migrant, usually found in company with the other small sandpipers. Have a mounted bird dated Grafton, August 17, 1913. Earliest arrival, May 3. Very common on the big slough in 1882 and later.

Red-backed Sandpiper—*Pelidna alpina sakhalina.* A fairly common migrant, especially in the spring, usually found in small groups mingling with other sandpipers. Have the following records from birds taken May 16, 1910; May 28, 1923; May 26, and May 29, 1924, at Grafton. Earliest arrival, May 16.

Semipalmated Sandpiper—*Ereunetes pusillus.* Probably the most common of the small sandpipers during migrations and, in fact, they are here most of the season, though I do not think they nest here. Have a mounted bird dated Grafton, May 13, 1911. Earliest arrival, May 13. As common as the Least Sandpiper from 1882 on.

Sanderling—*Crocethia alba.* A fairly common migrant in spring and fall migrations, usually in company of other sandpipers. Have records of birds taken Grafton, May 28, 1913; July 19, 1923; July 31, 1923, and June 2, 1924. Earliest, April 28. Large numbers from 1882 on.

Marbled Godwit—*Limosa fedoa.* Cannot be called a common migrant, although a few are usually seen every spring and a pair nested near a slough south of here. Have often found them in company with Hudsonian Godwits wherever they are found. Have a mounted bird dated Grafton, June 1, 1908, also the following records of birds taken: (4) June 4, 1923; (6) June 21, 1923; (1) April 24, 1924; (2) August 5, 1924; (3) May 18, 1924. Earliest arrival, April 23. Quite plentiful through the eighties, when it nested in the big slough.

Hudsonian Godwit—*Limosa haemastica.* A fairly common migrant, as a few are usually seen every spring migration, although they do not appear during the fall flight. A beautiful bird that seems to be losing ground from year to year. I have a mounted bird dated Grafton, May 7, 1911, and the following records of birds taken: (2) May 18, 1923; (4) May 21, 1923; (2) June 11, 1923; (9) May 18, 1923; (6) May 25, 1924. Earliest arrival, May 7. Quite rare throughout the eighties, and possibly more plentiful than now.

Greater Yellow-legs—*Totanus melanoleucus.* I would call this a rare migrant, as they are only occasionally seen, and very few at any time. Probably more common in the fall than spring. I have records from mounted birds dated Grafton, April 30, 1909; April 19, 1914,

also records of birds taken August 14, 1923; October 8, 1924. Earliest arrival, April 19. Very plentiful from 1882 on. More prevalent than the Lesser Yellow-legs in the early eighties.

Yellow-legs — *Totanus flavipes.* A very common migrant both spring and fall, being found in large numbers in nearly every slough or lake shore. Have a mounted bird dated Grafton, May 10, 1912, also records dated April 30, 1913; April 19, 1914. Earliest arrival, April 13. Not common in early eighties, but became more numerous as the Greater Yellow-legs diminished in numbers.

Solitary Sandpiper — *Tringa solitaria solitaria.* A common migrant and also quite a number undoubtedly nest here, as they can be found at any time during the summer months along our streams especially. Have a mounted bird dated Grafton, June 9, 1912; August 14, 1914, and August 7, 1923. Earliest arrival May 3. Very numerous in the early days. Began to diminish about 1886.

Western Willet—*Catoptrophorus semipalmatus inornatus.* A rare migrant in this locality and usually found singly or in pairs, never more together. I have collected very few of these birds during my work. Have a mounted bird dated Grafton May 4, 1905, also records from birds taken (1) May 4, 1913; (1) June 11, 1923; (1) May 27, 1924; (1) August 5, 1924. Earliest arrival, May 2.

Upland Plover—*Bartramia longicaude.* A fairly common migrant in spring and fall, and also are found nesting. I have found both eggs and young birds. They are becoming more scarce every year. I have a mounted bird dated Grafton, June 6, 1909, and birds taken June 19, 1914; May 28, 1923. Juvenile records July 3, 1923, August 4, 1923, May 26, 1924. Earliest arrival, May 9.

Buff-breasted Sandpiper — *Tryngites subruficollis.* A very rare migrant, being seen only in August in the fall migration. I collected two on August 14, 1923, and one on August 26, 1924. Earliest arrival, August 14.

Spotted Sandpiper—*Actitis macularia.* A common summer resident, breeding quite commonly throughout this region. The collection contains one taken here. Earliest arrival, May 9.

American Black-bellied Plover—*Squatarola squatarola cynosurae.* A common migrant found in the fall, usually seen in small groups, but have seen as high as sixty birds in a flock feeding on the shores of a lake. They are wary and hard to approach. I have one mounted dated Grafton, September 27, 1906, and others taken August 9, 1923, October 28, 1923, and October 3, 1924. Earliest arrival, May 25.

Golden Plover—*Pluvialis dominica dominica.* A rare migrant in the spring but quite common in the fall flight travelling in flocks of a dozen to fifty birds. Have a mounted bird dated Grafton, September 7, 1907, and birds taken September 28, 1923, and October 3, 1924. Earliest arrival, April 30. Exceedingly numerous in the early eighties, being found in flocks of several hundred but gradually decreased in numbers until they about disappeared; have increased again in last few years.

Killdeer—*Oxyechus vociferus.* A well known early arrival in the spring migration and a common breeder in this region, being found in the near vicinity of every little water hole on the prairies. A very noisy and welcome arrival in the early spring. A mounted bird dated Grafton, April 28, 1904. Earliest arrival, March 18. Nested in large numbers everywhere from 1882 on.

Semipalmated Plover—*Aegialitis semipalmata.* Cannot be called a common migrant, although a few are usually seen in both spring and fall migrations. Usually found in small flocks, never over a dozen and most often seen back from the water's edge a short distance, chasing insects. Two taken August 4, 1923, and one May 26, 1924. Earliest arrival, May 11.

Ruddy Turnstone—*Arenaria interpres morinella.* A rare straggler that was only seen once in this locality when a flock of twelve was found at Minto Lake on May 26, 1923, and two were collected and sent to the University of Michigan. Earliest arrival, May 26. Quite common in early eighties, but had gradually disappeared from this region until 1923.

Gray Ruffed Grouse—*Bonasa umbellus umbelloides.* A fairly common resident that is just holding its own, and not becoming any more plentiful although we have had a closed season here for several years past. An occasional red-phased bird is found, but the gray phase predominates. Two specimens in the collection were taken October 31, 1915. Five were taken October 9, 1922. One was taken January 1, 1923. Four were taken October 7, 1923. All were sent to the University of Michigan. Fairly common along the Red River from 1882 on.

Prairie Chicken—*Tympanuchus americanus americanus.* This is our principal upland game bird, furnishing the principal sport during the hunting season. During the years when the hunting dog was used the chicken decreased in numbers quite noticeably until they became very scarce. Added to the dog was the increase in the acreage of land put under cultivation, causing the destruction of most of their nesting

ground; but since the dog was prohibited and with the increase in the growing of alfalfa and like crops, this grand bird has made great strides toward increasing and is now rapidly coming back to former numbers. In 1916 and 1917 I trapped live grouse for the United States Department of Agriculture and found that nearly eighty per cent of our birds were non-breeding males, a condition that was alarming. In 1918, I think, the State Legislature passed the law prohibiting the use of so-called bird dogs and limiting the bag to five birds a day, and this fact alone meant the salvation of the Pinnated Grouse, which had no show whatever against the combination of dog and magazine shotgun. Have two mounted in the collection dated Grafton April 13, 1913. Heard in 1882 but were not seen until 1883, when the first one was killed. Became more common every year from then on.

Prairie Sharp-tailed Grouse—*Pedioecetes phasianellus campestris.* A common resident about fifteen miles west of us, where it becomes more common than the Pinnated Grouse. In our immediate vicinity it is seen only during the winter months. Have mounted birds in the collection dated Grafton, December 18, 1912. One killed April 6, 1924. One killed January 1, 1923. Four killed February 15, 1923. Some of these were the Columbian Sharptail which occurs here only in winter. They were sent to the University of Michigan. Very common in 1882, but appeared to diminish in numbers or move out as the Pinnated Grouse moved in.

Columbian Sharp-tailed Grouse—*Pedioecetes phasianellus columbianus.* A rare winter visitor in this immediate vicinity, but is quite common during winter in the Pembina Mountain region. A mounted specimen in the collection is dated Grafton.

Passenger Pigeon—*Ectopistes migratorius.* Extinct. Have a record from W. H. Williams of a Passenger Pigeon killed at Glasston in the spring of 1882. Last one killed on the big slough in 1882 by W. H. Williams. It was at least ten miles from any timber and appeared exhausted when shot as it allowed a very close approach.

Mourning Dove—*Zenaidura macrura carolinensis.* A very common summer resident, nesting in large numbers during the summer. Specimen in the collection dated Grafton, July 25, 1904. Earliest arrival, April 13. Fairly common where there was timber from 1882 onward.

Turkey Vulture—*Cathartes aura septentrionalis.* A rare migrant being seen only rarely during spring and fall migrations. I have a mounted specimen taken at Ardoch, North Dakota, October 4, 1914.

and two records dated Grafton, April 20, 1902, and May 22, 1921. Earliest arrival, April 25. Occasionally seen during migrations from 1882 onward.

Marsh Hawk—*Circus hudsonius.* A common migrant and summer resident in this locality, found nesting in sloughs where their nests are built in the tall grass. An early arrival in the spring. A pair mounted in the collection dated Grafton, May 11, 1908. In 1917 the first arrival was March 21, and last one seen was September 18. In 1921 was March 23, last seen September 21. In 1922 was March 30. In 1923 was March 21, and last seen October 24. In 1924 was March 25. All these first arrivals were male birds, the females not appearing until two or three weeks later. Very common breeder throughout the district from 1882 onward.

Sharp-shinned Hawk—*Accipiter velox.* A fairly common migrant and usually a few pairs nesting in this region. A mounted specimen in the collection dated Grafton, May 8, 1912. One April 25, 1913, and another September 7, 1923. A very destructive hawk to smaller birds. Earliest arrival, April 4.

Cooper's Hawk—*Accipiter cooperi.* A common migrant, which frequently nests. A very destructive hawk and not always confining itself to smaller birds. A mounted bird in the collection dated Grafton, June 6, 1911; other records, May 1, and May 9, 1923; April 20, and May 5, 1924; and August 31, 1924. These specimens sent to the University of Michigan. Earliest arrival, April 4.

Goshawk—*Astur atricapillus atricapillus.* An exceedingly destructive hawk that is only a winter visitor and not common at any time. We had a large number here during the fall and winter of 1907, but only an occasional one since. Have a mounted bird dated Grafton, April 9, 1907, and one sent to the University of Michigan taken January 21, 1917. Have seen none here since. Earliest arrival, January 21.

Kriders' Hawk—*Buteo borealis krideri.* A rather rare breeder in this district, and would not call it a common migrant, although they may be more common in migration than supposed, as it is rather difficult to distinguish. Have a specimen in the collection that was taken September 6, 1909, that nested here. Have seen others that were identified as Krider's during migration. Earliest arrival, March 21.

Western Redtail—*Buteo borealis calurus.* Probably the most common of our Redtails both in migration and found nesting. They are likely the eastern form principally, as noted in "Bird Life of North Dakota", by N. A. Wood, page 38. Have never taken a melanistic

Redtail nesting here or found a dark phase in any nest. Melanistic forms all appear to come from north of us as they are seen only during migrations. Earliest arrival, March 19. Very numerous during migrations on the big slough from 1882 onward.

Harlan's Hawk—*Buteo borealis harlani.* A rather rare migrant in this locality both in spring and fall, most commonly found in the melanistic phase and a bird that is hard to identify unless in the hand. I got my first record May 1, 1916. It is in the Museum of the University of Michigan. Since that time I have the following records from here: October 19, 1923; a mounted bird taken October 19, 1923; two taken October 14, 1923; two September 30, 1924; two October 28, 1924, and one October 29, 1924, in light phase. These birds are all in the University of Michigan except the mounted bird. These large hawks pass through here and their flight lasts but a few days, at least it is for only a few days they are taken and after that we find nothing but ordinary and melanistic Redtails. Am in receipt of a letter from Mr. P. A. Taverner of Ottawa, Canada, an ornithologist from the Victoria Memorial Museum, who states that the appearance of Harlan's Hawk nesting is only erratic south of the Yukon Territory, and he has lately received word that they are quite common in the Atlin country, bordering on the Yukon. Undoubtedly their breeding ground is in this far north country. Earliest arrival, March 26.

Swainson's Hawk—*Buteo swainsoni.* Most commonly seen in the melanistic, or dark, phase, but uncommon in this district now where they were quite common years ago. Have not found them nesting here in the last fifteen years. I have taken these birds in both phases during migration but only two of these in the light phase. A mounted bird (dark phase) in the collection taken at Grafton, April 3, 1906, and a light phase bird taken May 11, 1924. Other migration records are March 21, 1917; March 30, 1919; March 26, 1920; March 24, 1921; March 13, 1921; March 24, 1922; March 21, 1923; April 5, 1925.

Broad-winged Hawk—*Buteo platypterus.* A very common migrant and summer resident, found nesting quite commonly throughout the timber regions. A mounted specimen in the collection taken at Grafton, April 15, 1910. Several others in the University of Michigan Museum dated April 24, 1913; September 8, 1923; April 24, 1924. Earliest arrival, March 31.

American Rough-legged Hawk—*Archibuteo lagopus sancti-johannis.* A fairly common migrant during spring and fall migrations. These birds are often taken in the dark, almost black, phase, as well

as in the light phase. An early arrival in the spring, usually first part of April, and one of the last varieties to leave in the fall. They do not nest here. A mounted bird in the collection taken at Grafton, November 1, 1909, also two others taken October 2, 1920, and October 20, 1920. Earliest arrival, March 12.

Ferruginous Rough-leg—*Archibuteo ferrugineus.* A rare migrant here and I know of one pair nesting in this vicinity in 1915. I have a mounted specimen taken at Grafton, October 1, 1920, and one in the University of Michigan Museum taken October 3, 1920.

Golden Eagle—*Aquila chrysaetos.* A rare migrant through here, usually one or two are seen each season. I shot at one in 1916, and also shot at one in September, 1923. Saw one on November 27, 1924, but so far have not been able to bring one down.

Bald Eagle—*Haliaeetus leucocephalus. leucocephalus* The Bald Eagle occurs about as rarely as the Golden Eagle, and one seldom sees a mature bird. I remember of seeing two during spring migrations years ago. I shot one in the fall of 1914, and another was killed here in September, 1923. Saw one October 10, 1924, near here.

Gray Gyrfalcon—*Falco rusticolus rusticolus.* Have seen only one of these birds in this locality, and it is mounted and in the collection, taken October 7, 1908. This bird must be considered a rare straggler this far south. Seen early in the spring during migration but not common in 1882.

Prairie Falcon—*Falco mexicanus.* A rare migrant through this locality having seen only three that I could identify as this species. One was seen May 2, 1923, and another seen October 2, 1924. I sent one to Dr. Walter Koelz, of the University of Michigan, taken at Grafton, May 16, 1923. Earliest arrival, May 16. Rare in the early days.

Duck Hawk—*Falco peregrinus anatum.* I have only one record of this hawk taken in this locality. It was killed at Glasston, October 2, 1904. It is now in the collection of C. A. Hale of Grand Forks, North Dakota.

Pigeon Hawk—*Falco columbarius columbarius.* A rare hawk in this locality in migration; have very rarely seen a bird, well along in the breeding season, that makes me believe that it nests here erratically. A mounted bird in the collection taken at Grafton, May 8, 1912, also one sent to University of Michigan, taken September 16, 1914. Earliest arrival, April 24. Fairly common during migration in the early eighties.

[*To be continued*]

THE WILSON BULLETIN

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EDITORIAL

The Kansas City meeting is now a matter of history, and those in attendance must have been in agreement that it was a success from every point of view. Kansas City is the most western point at which we have thus far held a meeting, and we felt that it brought us in contact with that great group of southwestern states, including Texas and Oklahoma, from each of which we had representatives. About thirty other scientific societies held meetings during the same week in conjunction with the American Association. All of the meetings were held in the business district of the city, most of them being held in the various hotels, which are bunched together within a few blocks of one another.

The minutes of the meeting are given elsewhere, and, while trying to avoid a duplication of facts there presented, we may review a few impressions gathered at the time. All arrangements had been carefully planned by our local committee, of which Dix Teachenor was chairman, in co-operation with the local committee of the A. A. A. S., and the success of the whole affair was attributable very largely to Mr. Teachenor's thoughtfulness.

Perhaps the outstanding feature of the meeting, aside from the formal program, was the cordial and democratic good-fellowship which was felt on every hand. There are various reasons for this, and we hope it may always remain so. A very pleasant little affair, not on the published program, was the visit on Tuesday evening to the home of Mrs. M. W. Barber to see the set of Audubon's "Birds of America" in the elephant folio edition. The setting was unique, and all were interested in again looking upon this magnificent work.

The attendance at this meeting was probably the largest we have ever had, although we do not have the figures of the Nashville meeting at hand. Twelve states were represented, besides Washington, D. C. A large number of members were present who had not previously attended a W. O. C. meeting. We trust it may become a habit.

Conversation during the sessions brought to light some sentiment favoring an occasional meeting earlier in the fall, to accommodate those business men who are particularly busy at the close of the year. The Friday and Saturday following Thanksgiving would be the most suitable time, and it would probably be feasible to hold a meeting at this time when we do not go with the American Association.

The frontispiece of this number of the BULLETIN is reproduced from a charcoal drawing by Mr. Edward von Seibold Dingle, of Mount Pleasant, South Carolina. The subject is a Barred Owl, from life, and as it appeared in the shadowy background of night. The frontispiece in the last, December, issue of the BULLETIN was made from a wash drawing in black and white by Mr. George Miksch Sutton, of Harrisburg, Pennsylvania. We think our readers will be interested in noting the differences, insofar as they are apparent in the reproductions, in the various methods in artistic technique. We are looking forward to other contributions by both of these artists.

At the recent Kansas City meeting of the W. O. C. the resignation of Professor Gordon Wilson as Secretary was accepted. Professor Wilson has served the Club in this official capacity for three years, and during this time the Club has grown and prospered as in no other period of its history—and for this a good share of credit may go to the Secretary. The Club owes a debt of gratitude to Professor Wilson for his faithful and efficient services.

The newly elected Secretary, Howard K. Gloyd, is professor of Biology in Ottawa University, at Ottawa, Kansas. He is a graduate of the Kansas State Agricultural College, and has done graduate work in the University of Michigan. His major interest is ornithology. He enters his new work with enthusiasm, and we are confident that his office will be effectively carried on. We bespeak for him the cordial co-operation of our members.

At the last meeting of the American Ornithologists' Union, in New York, steps were taken to establish a memorial to the life work of Robert Ridgway; it is to be known at present as the Ridgway Memorial Project. The plan is to raise a fund sufficient to hold in perpetuity as a bird sanctuary the eighteen acres which constitute "Bird Haven", the present home of Mr. Ridgway. The idea is a very happy one, and we trust that the committee in charge will be able to carry on the project to immediate completion. At the Kansas City meeting the Wilson Ornithological Club appointed Mr. Percival Brooks Coffin, of Chicago, as its representative on the joint committee which is to have charge of the matter. Their plans, when formulated, will be made known.

We trust that our new cover design has been noticed, and that it meets with approval. We are indebted to Mr. George Miksch Sutton for its production. The old etching has been in service through ten volumes, and was beginning to show the effects of old age.

Most of our readers are lovers of the out-of-doors, and are interested in the welfare of our national parks. We have just read a freshly printed pamphlet entitled "Hands Off the National Parks", by Willard G. Van Name. We are here told how commercial interests are making dangerous headway in planning a remapping of some of the national parks in such a way as "to juggle out timber or other things", as Dr. Van Name puts it. We believe that any reader may obtain a copy of this booklet by addressing Dr. Van Name in care of the American Museum of Natural History, New York City, and it will be well worth while for all friends of the national parks to do so.

GENERAL NOTES

Conducted by M. H. Swenk

The Original Roosting Habits of the Chimney Swift.—One day in the late summer, just after the Civil War, in the deep woods of middle Tennessee, I came upon a very large Tulip-tree, nearly six feet through, and at least fifty feet to the first limb. One of the limbs had been broken off, leaving a hole about two feet across, which had been the starting point of a deep hollow in the tree. It was just before sunset, and the Chimney Swifts (*Chaetura pelagica*) were pouring into the hole by the dozens, just as they now do into chimneys when going to roost. I have never noticed another instance of the kind.—J. A. McLaughlin, *Marshall, Mo.*

The Bald Eagle in Indiana.—On January 13, 1926, I read of an eagle captured in a corn field near Greenfield, Indiana, twenty miles east of Indianapolis. The next day Mr. and Mrs. Harry H. Coburn and I drove over and located the person who had it in captivity. It was being kept loose in a cellar, but, after a little difficulty, we caught it. We found that it was a Bald Eagle (*Haliaetus leucocephalus* subsp.) not yet in the adult plumage. It measured more than seven feet across the wings. The shoulders were calloused as if from having been bruised and healed many times. Its strength of talons was prodigious I found it less of a fighter than the adult Barn Owl, though much more powerful. After taking some moving pictures of its actions we again liberated it in the cellar. No nests of this eagle have been reported in recent years nearer than northern Ohio.—S. E. Perkins III, *Secretary Indiana Audubon Society, Indianapolis, Ind.*

Some Notes on the Horned Grebe in Michigan.—On May 19, 1925, while on the State Ferry crossing the Straits of Mackinac and about a third of the way across from St. Ignace, I saw a bird on the water, which, after consulting Reed's "Bird Guide," I identified as the Horned Grebe (*Colymbus auritus*). A strong south wind was blowing, so that the waves were rolling fast and rather high for the bird. Sometimes when the waves, especially the large ones, would overtake it, it would be completely submerged, and, as the wave passed over, it would sometimes appear to go entirely out from under the bird, thus dropping it down on the water as it was left by the passing wave. On the next day (May 20) I saw three Horned Grebes at the edge of a lake near Odin, Michigan. They were first seen as I passed by in a car, which was stopped as soon as possible. The birds were yet near the edge of the water upon my approach. They hastened into deeper water as soon as they saw me and my three companions, but I obtained a good view of their colors before they got far enough out to go under the water. They remained under but a short time before coming up, which gave another good view, their farthest distance away being not more than seventy-five feet. In identifying the Horned Grebes the buffy white ear tufts were the principal field marks; but also a comparison of the size with that of other grebes was considered. It may be possible that the localities here given are included in the summer home of *Colymbus auritus*, but if they breed there it still remains to be proved by the finding of a nest.—O. M. Bryens, *Three Rivers, Mich.*

Franklin's Gulls as Insect Destroyers in the North Platte Valley of Nebraska.—The most momentous ornithological event of the season in our part of the North Platte Valley has been the arrival of large flocks of the Franklin's Gull (*Larus franklini*). We have been inflicted, for several years now, with a grasshopper plague. Having read so much about the gulls, we had been hoping

that they would come and rid us of our trouble. Last year they were in the lower end of the valley, and this year they came back again in July, coming up the river almost to the state line.

Although they were to be found almost everywhere, they seemed to have a preference for the new-mown fields of alfalfa, where grasshoppers and other insects were most plentiful. Scattered as they would be over great fields, their white plumage contrasting against the vivid green of the hay made a most beautiful picture. They also delighted in newly plowed fields, where some would follow the plow, walking in the furrow while looking for choice grubs or even mice. On the plowed ground they would pay no attention to the horses until they were almost up to them, when they would fly a short distance and settle again.

I delighted in watching them as they skimmed above the alfalfa or beet tops after small flying insects, or as they came straggling up the river early in the morning in many small scattered groups, because their flight was so easy and graceful, the very poetry of motion. They stayed until late in October so that I had many chances to observe them, both in flight and on the ground. They usually flew quite low so that their soft blue-gray mantles and black heads were easily seen, even without field glasses, and when they would circle just above the village the children, and even older persons, would grow quite excited, and you would see people everywhere out on the sidewalks watching them. Their great numbers has created a local interest in bird study that just our common birds could not have produced.—Mrs. J. W. Hall, *Mitchell, Nebr.*

The Re-use of Old Nest Material by the Blue-gray Gnatcatcher and Ruby-throated Hummingbird.—Soon after I began studying birds I made a collection of nests of the species that were commonly found near my home at Eubank, in south central Kentucky. My usual procedure was to take the nests soon after the young birds had left them. I soon learned that to secure the nests of the Blue-gray Gnatcatcher (*Polioptila caerulea caerulea*) and Ruby-throated Hummingbird (*Archilochus colubris*) it was necessary to collect them as soon as they were deserted, for when they were left any length of time they either disappeared altogether or were so badly torn to pieces that they were worthless for my collection.

On May 28, 1889, I learned what becomes of the Gnatcatchers' nests. I had gone to the woods to collect a nest that had been located on April 26, at which time the bird was incubating. The nest was about thirty-five feet up, on a limb of a Red Maple. I climbed almost to the base of the limb, and was within twelve feet of the nest, when I paused to catch breath. In less than a minute a female Blue-gray Gnatcatcher came to the nest, and, with much twittering, began to pull lichens from it. As soon as she had a bill full of the lichens she flew away to the south. I waited, and soon she returned for another load, going with it in the same direction. This time I slid down the tree and followed her, and soon found the new nest. I have no means of knowing whether the new nest was a second one of the same pair that built the first nest, or was the work of a different pair. Since then I have seen these birds carrying material from an old nest several times, the last time being last spring, when an early nest was carried away soon after the young birds had left it.

I have no written record of having seen the Ruby-throated Hummingbird carrying away material from an old nest, but have a distinct recollection of having seen it doing so in at least one instance, a number of years ago. The fact that

nests of the Ruby-throated Hummingbird usually disappear very soon after the young birds have flown, strongly suggests that, like the Blue-gray Gnatcatcher, these tiny feathered rainbows use material from old nests in the construction of new ones.—JOHN B. LEWIS, *Lawrenceville, Va.*

Bob-white a True and Faithful Father.—On the sixth of September a farmer friend came to me and told me of a nest of Bob-whites along the roadside near the edge of the timber, and on account of the late date I decided to give this nest careful observation and watch the results of such a late nesting. When I approached the nest on September 6, I found the mother bird carefully brooding her twelve white eggs, just five feet from the wheel tracks of the road, in a nest which was so carefully arched over that she was quite well concealed. She was of exactly the same color as the surrounding dead grass, which had recently been mowed, the sickle bar having passed just over her head, not missing her over an inch.

I visited this nest daily, and each time I found conditions the same, with the mother bird patiently brooding. But she would always flush upon my approach and would not allow me to get her photograph. On September 15, just nine days after my first visit, upon approaching the nest we observed a mass of brown feathers in front of the nest, and "Old Bobbie" himself was brooding the eggs, or rather eleven of them, as one had been rolled out of the nest and lay near by. The mother bird had been killed and devoured some time during the night, and nothing remained but a lot of her feathers. The eggs, however, had been spared, and our old faithful friend Bobbie had now undertaken the job of raising a family, which sometimes is the lot of a lone widower. He was a great deal more shy than the mother bird had been, and I could not approach nearly as close to him before he would flush. I would have given a great deal to have secured a good photograph of him on those eggs, but I did not have the heart to set up a blind and wait for him to return, as is customary. I was afraid that he would not return, and I wanted so much to have him complete the job which he had started.

I continued my daily visits to this nest, each trip requiring eight miles of country driving. On the afternoon of September 21, I found that one egg had hatched nicely, and there were eleven whole eggs remaining in the nest with the two half shells, but neither the chick nor "Old Bobbie" were anywhere to be seen, so I presumed that he was away in the grass somewhere giving his little son his first lesson in catching grasshoppers. That night it rained all night, and the next forenoon was so cloudy and wet that I could not get to the nest until in the afternoon. When I drew near I found that all that remained was a lot of empty shells, as every egg had hatched during that night of rain and "Old Bobbie" had gotten away with every chick without me so much as seeing one of them, much less getting a photograph.

I knew that birds of this kind take to the grass as soon as hatched, but I hardly thought that the entire dozen would get away during a rain without me seeing one of them, and I only away from them for about twenty hours. I had secured a good photograph of the nest and twelve eggs on September 6, one of the mass of feathers with the nest in the background on September 15, and one of the nest and empty shells on September 22, and I will have to content myself with them. However, the experience gained by watching this tragedy and the

happy final ending was worth more to me than all the photographs I could have secured.

I experienced, however, the inner battle between the nature lover and the photographer. Had I set up a blind and waited I might have secured some excellent photographs of "Old Bobbie" on the job, but I debated that if I did so I might also frighten him away altogether. Thus the battle raged for several days until finally the true nature lover spirit within me won out, and I will leave it to the readers whether the right won or not. It increased my love of the Bob-white that much, however, that I will always fight for his rights and I will place him first on the list as our most valuable bird and man's best friend.—W. M. ROSEN, *Ogden, Iowa.*

Birds of a Feather Flock Together.—As I stood on the top of the hill at the rear of my home on an October evening of 1924, watching the swirling mass of Purple Grackles and Starlings coming in to roost all around me, I thought of how little we have really learned, since the composition of this wise little saw, of the basic impulses influencing the organization and government of the flocks and roosts of our wild neighbors. If anyone had asked me why the Purple Grackle persists in roosting in shade trees close to man, I would probably have replied for the same reason that it nests near dwellings, namely, for protection against the thoughtless or irresponsible man, coupled with the desire to take advantage of the thick foliage of our shade trees, especially after the forest trees had become denuded.

For the first time in my life I found myself in the center of the establishment of an entirely new roost. In almost fifty years of residence in the same place I cannot recall a single instance of a large roost of any species of wild bird in my immediate neighborhood until this temporary or tentative roost of Purple Grackles and Starlings developed in our deciduous boundary trees in October, 1924. During October, 1925, on the evening of the 17th, a roost of probably 500 individuals established itself undisturbed in our cherry, locust and maple trees. This flock increased to something like 10,000 by the 19th, overflowing to the trees of my immediate neighbors, with the maples, pines and spruces the favorites, abandoning the deciduous trees as fast as their leaves dropped. It must be explained that the maple as a shade and ornamental tree came into vogue locally during my lifetime, and has recently grown to goodly proportions. On the blustry evening of October 25 the birds, now approximateing 20,000 and including some Cowbirds, came in at dusk riding the gale like snowflakes, and, as some of the maples had become denuded of leaves during the day, such of the maple, cherry and apple trees as were still clothed, together with the evergreens, proved the prime favorites, the overflow settling in the thick foliage of the rows of maples along the nearby avenues. The trilling and chattering of the Starlings lasted as late as 10 P. M., with perhaps little abatement all night long, in the trees at the rear of my home, although the birds that had located along the avenues, which were probably nearly all Purple Grackles, were silent.

My subsequent notes follow: October 26—The birds left their roost at 6:15 A. M. but this evening as they came in some one shot at them, and in consequence only a few roosted on the premises, though they were numerous in the shade trees along the avenues.

October 27—Again I heard the reports of a shotgun as the birds began to flock in increasingly large numbers at 4 P. M. All of the maple and cherry trees and

some of the pines and spruces on or bordering the place were filled, and the overflow was as before.

October 28—About 4 P. M. I observed small squalling squads of Starlings passing up a ravine leading from the Great Valley, where the species flocks in appalling numbers, flying low or running on the ground, apparently hastening to the muster upon the hill. The roosting birds become increasingly abundant. Starlings, as usual, were noisy all night.

October 29—A killing frost with the temperature 28° F. this morning. Grackles and Starlings left the roost in a compact body at 6:10 A. M. and this evening few roosted on the place, though the avenues were crowded, probably because the maple leaves had thinned less there than on the hilltop.

October 30—It started to snow at 7 A. M., and continued snowing without pause until well into the night. This evening it was a great sight to see flock after flock, varying approximately from 100 to 2,000 birds, from 4:35 to 5:00 P. M., circling about the roosting ground and then passing overhead in a northeast by east direction in search of a more sheltered roost, thus drawing the final curtain for the season upon the Grackles. Probably some of the Starlings, in the excitement of the community spirit, accompanied them southward on the morrow, but the bulk of them resumed their normal every-day life about us.—FRANK L. BURNS, *Berwyn, Penn.*

The Fall Migration of 1924 in East Central Ohio.—The months of September, October and most of November, 1924, were spent at our farm home, located four miles south of Uhrichsville, Tuscarawas County, Ohio, and good opportunities were at hand to observe the fall bird migration. During the period from September 20 to November 8 we "listened in" on the migrants practically every night. "'I hear the beat of their pinions fleet, but their forms I cannot see." But we heard the beat of their pinions only a few times. More often we saw their forms against the moon. But most unmistakeably, "I hear the cry of their voices high." This, however, is not true on cloudy nights, because then they fly low down.

The first night migrants were heard on September 10 and 11. There were but few nights between September 20 and October 18 that bird notes were not heard, and there were several high tides of migration. On September 24, 25 and 26, there was a great wave of warblers and thrushes. On September 27 the thickets and woodlands were overrun with these birds, the south wind of that date seeming to hold them in check. On the night of September 28 there was a light movement, increasing with a light west wind on the 29th to a flood of migration on the 30th. This was accompanied by a decided drop in temperature and a moderate wind from the northwest to the north. I was out until 2 A. M., and from dark until that hour group after group followed in such close formation that from some direction or another their notes could be heard at all times. The note of the Green Heron was heard frequently. At 8 P. M., 10 P. M. and 11 P. M. the notes of the Great Blue Heron were heard, and the Bittern was heard several times.

Several groups of Killdeers were noted during the last week of September, and one group of thirty-five birds that we particularly noted tarried for several days on a field that was being prepared for wheat. A local group of four old birds and five young ones, representing two families that had come from nests on our farm and a neighboring one, joined the thirty-five strangers in their feed-

ing, but I noticed that when the teams disturbed them and they flew to another part of the field that the local group always separated from the strangers. The thirty-five strange Killdeers were not seen after September 29, seeming to have left on the migration wave of September 28 to 30, but the local group did not migrate until in November.

On October 5 and 6 there was a small wave of migration, while on October 16, 17 and 18, there was a great sparrow wave, with a considerable number of Woodcocks, Mourning Doves and Meadowlarks. The thickets and fields were overrun for a few days with groups of the Field, Vesper, White-throated and Fox Sparrows, while Towhees, Myrtle Warblers, Hermit Thrushes and Kinglets were much in evidence. We found the Lincoln's Sparrow in this wave, for the first time in several years.

The notes of the Great Blue Heron were again heard on the nights of October 17 and 26. On October 26, 27 and 28, came another sparrow wave. The Chipping and Song Sparrows and the Hermit Thrushes were more in evidence on this wave, and the Myrtle Warblers were present in considerable numbers. The Tree Sparrows and Slate-colored Juncos came in greater numbers at this time. Also, several flocks of ducks were noted. A small company of Canada Geese was noted on this wave, and again on November 3 and 6, about 285 Canada Geese passing between 1 P. M. and 4 P. M., and another company being heard at 9 P. M., on the latter date. This was the most geese that we have seen in migration for many years.

Nighthawks passed on the 15th, 16th, and 17th of September, but in much smaller numbers than usual. On November 8 several large companies of Bronzed Grackles and Red-winged Blackbirds passed, and one company on November 9. On a neighboring farm a large company of Bronzed Grackles and Red-winged Blackbirds had a common roost for two or three weeks and we had a good opportunity to study the groups as they left for the day and returned in the evening. This company departed on November 18. From 11 A. M. to 1 P. M. a straggling line of Crows were passing, but we had no large mobilization of Crows in the fall of 1924. No large mass movements of Robins were in evidence during the fall, and only small local groups were noted. Two Loons were noted on October 27 and two on October 29. There is no hesitation in the flight of the Loon. It is clean cut and straight, with an apparent objective ahead and the purpose to get there quick.

It is a difficult matter for me to distinguish the migrant flights from the food flights. The route of the Nighthawks, Bronzed Grackles, Red-winged Blackbirds and Crows, as checked by the compass, was west, 35 degrees south. The straggling groups of migrating Bluebirds seemed to take this course, but we have heard their call notes at night on a route to the southeast. The southeast course, as checked by the compass, is south, 20 degrees east. I am pursuaded that the number of migrants passing here to the southeast indicates more than a local movement, one that is found in general over Ohio, and seems to point to a convergence to a well-marked route from southeastern Ohio, while the number flying to the southwest is probably no greater than would be found at other points between here and Lake Erie or the Ohio River.

The Pileated Woodpeckers were seen on numerous occasions in September, October and November, but I did not visit the nest tree in 1924, nor the Laurel Valley, where we had previously found the Long-eared Owl and the young of the

Great Horned Owl. The Florida Gallinules, Least Bitterns and rails returned to the "oasis" in the spring of 1924, but we did not take the time for a census.—CHARLES R. WALLACE, *Delaware, Ohio.*

The Behavior of Birds at a Georgia Feeding Tray.—The behavior of different birds at our feeding tray has been a source of considerable interest to us. The tray, placed in the top of a cherokee rose bush, with an evergreen tree overhanging the bush, is about twenty feet from the house and in full view of several windows. Brown Thrashers, Blue Jays, Mockingbirds, Cardinals, Towhees, Song Sparrows, White-throated Sparrows and English Sparrows have been more or less regular visitors

English Sparrows and Mockingbirds have been unwelcome, and have been driven away frequently. The English Sparrows soon learned they were not welcome, and most of them would fly away if they heard the door open, or even if one tapped on a window-pane. Some, however, merely slipped into the bush to return to the tray shortly. Many learned that other species were not driven away and so would wait until some other bird was on the tray, when they would slip up with the other bird. Towhees and Cardinals would sometimes allow English Sparrows to eat at the same time as themselves, but the Cardinals, especially, frequently drove them away. English Sparrows never dared to come to the tray, or to remain there, if a Thrasher, Blue Jay, or Mockingbird was near by.

The Mockingbird never ate at the tray but often perched on it and allowed no other bird to approach. One Mockingbird was fond of perching in a near-by tree and driving away any other bird that came to the tray. The Blue Jay alone was free from molestation. In fact the advent of a Blue Jay near the tray meant the departure of the Mockingbird.

Of all the birds that visited the tray the Blue Jay was the most wary. The slightest noise would cause it to fly away, and yet when the Blue Jay appeared, any bird, except a Brown Thrasher, that happened to be on the tray would at once yield its place to the Jay. Two or even three Jays would eat side by side, sometimes feeding each other. Now and then a Blue Jay would carry food to a bird apparently too timid to come to the tray.

The Song Sparrow much preferred to feed on the ground and search for bits dropped by other birds, but would sometimes sneak up through the bush. The White-throated Sparrows also preferred the ground, but they came to the tray more frequently and more openly.

The Brown Thrashers often came in pairs and fed side by side. They had no fear of Blue Jays and were the victors in any dispute as to which might eat. With the Mockingbird matters were reversed. A Mockingbird might drive a Brown Thrasher away but yielded to a Blue Jay.

Neither the Cardinal nor the Towhee, except in the height of mating, would allow another of its kind on the tray with it. The males usually appeared to have first rights. One bird would feed for a while, then leave and another would take its place. Four or five might be waiting turns to eat but two never ate together. Once, in the midst of the mating season, I saw a pair of Towhees eat together. Several times I have seen a pair of Cardinals together, the male now and then caressing the female with his beak, or feeding her. At other seasons they drive one another away. The Towhee could not eat long without scratching and knocking food onto the ground and its mate while waiting her turn found more or less to eat on the ground.—BERYL T. MOUNTS, *Ballard Normal School, Macon, Ga.*

BIRD BANDING NEWS

Conducted by Wm. I. Lyon

ACADIANS I HAVE FOUND

BY S. E. PERKINS III

There is in Riverside Park, Indianapolis, bordering the golf course and acting as a natural hazard, a piece of boggy ground about ten feet wide and one thousand feet long in which, during most of the spring, water stands. Cat-tails grow in the center and along its borders tall willow sprouts abound. This makes a rather dense thicket throughout which Red-winged Blackbirds call and chatter all spring and summer.

We were there seeking nests of fledgling Red-winged Blackbirds that we might band them. By June 22 I had banded seven baby red-wings in two nests. The nests we had found up to then had been in the tops of the willows, about eight feet up, mostly in groups of two and three. That day we found a red-wing nest only four feet up with one very young bird and one egg.

We had seen Robins in the elms bordering the boulevard nearby and thrashers and a little Green Heron nesting a short distance away at the bank of the lagoon but in this long strip of willows no bird notes were heard except the red-wings.

Finding the one nest lower than the others inspired us with a hope of finding others. We were thus engaged when we came upon a small beautifully felted nest of fibers, four feet up in the crotch of a willow stalk, so built that a shoot of sycamore sapling with its large leaves came through the same crotch almost completely hiding the nest site. The nest had four creamy eggs, speckled around the larger end with brown. We withdrew to ascertain the owners. Shortly a flycatcher appeared. Was it the Least, Yellow-bellied, or Acadian? All look very much alike as they flit about. They look alike as they sit close down on a nest.

But a little time with the books "makes a whale of a difference" in one's guesses.

The Least Flycatcher was eliminated for its eggs are white without spots. It was not the Yellow-bellied for this species builds on the ground. It did not sing; it only fussed. It was surely the Acadian or Alder. On June 25 the bird was incubating as before. When it left the nest we got photos of the nest and eggs. The measurement of the eggs could not determine which species we were observing. On June 27 the nest was as before and we still saw one bird and heard no song. The visit of June 30 found four very small birds in the nest. No parent bird was about while we made our observations. Natural growth was taking place and was the only thing noted on July 1. On the fifth of July the four fledglings were banded and photographed.

No visits were made again till the tenth when early in the morning I took a drop trap and a gathering cage and spool of string and went again to Riverside.

All four flycatchers were in the nest. While I watched, for the first time both parents came and fed. I observed that one parent went east and the other went west in the willows for food. Many visits of each confirm my idea that each in its direction would fly from the nest some thirty to fifty feet, there find moths or bugs and return by short flights to bring the food. A few times on leaving the nest the birds would come to the edge of the willow thicket opposite

the nest and fly along in the open for a distance then disappear into the brush. The parents fed alternately. Seldom were they at the nest at once.

I placed the drop trap in the open a foot or more from the thicket. Took two fledglings and placed them in the gathering cage and put it under the set drop trap. Ran my string up the hill to the boulevard near my auto. While I waited two boys came by and sat with me. Their interest in my doings was so stimulated that one remembered a nest he had seen in another part of the park and later, when he took me there, we found a quail sitting on sixteen eggs.

Ten minutes after the trap was set I caught the female parent. She was less afraid in her desire to feed her young than was her mate. It was only after I handled her that I was convinced that I had an Acadian Flycatcher (*Empidonax virescens*).

Our captive had its second and fourth primaries of equal length, as were the first and fifth, though shorter. The upper mandible was dark and the lower light. After banding she was photographed. She lay quietly in one's haid with closed eyes as if asleep. The Cardinal, Robin, Blue Jay, Hermit and Wood Thrushes will pose long enough to be photographed, but always with eyes wide open. I never had one of these close its eyes while being held, even for a second.

Another fifteen minutes elapsed while I watched the male Acadian fly about the trap with food. He would alight near and then fly farther away. Would light on top of the trap and try to find a way through the netting, then fly back to the willows. Just twenty minutes after the mate was caught I had the male. Both maintained silence most of the time while in our possession. They gave only a few faint squeals. In all our handling of this adult pair, if held quietly, the birds closed their eyes. A shake would cause either one to open its eyes wide and look about but each seemed at once to be re-assured of its safety and would feign sleep again. Both banded adults were turned on their backs at the same time in the hands of the two boys and the habit of each proved to be to close the eyes for the many seconds required to focus a graflex on them. We repeated five times this same stunt with always the same result. When released they went to a large maple near the swamp.

Next day when I returned both parents were feeding. Two fledglings were still in the nest. The others had taken flight. Some weeks later I gathered the nest and am now eager for another season to roll around that I may try to find these friends again. Will they come mated as they were? Will I find each parent with a new mate? Will the young come to the same locality as the parents? Only time, and in the spring, a lot of patience, can tell. If I find them I'll let you know.

INDIANAPOLIS, INDIANA.

WINTER NOTES ON THE BLUE JAYS. Thirty Blue Jays, more or less, have used this station during the past winter mostly to maintain their own storage supplies in tall oak trees nearby. Cats and squirrels are kept away from these trees and from the traps by the jays. From January 1 to February 15, 1925, no jays were banded, the jays already banded keeping other jays strictly away. On February 15 in an effort to get new jays to come to the traps, a week's supply of food was provided. Inside of two hours this was stored up as a reserve supply in their own feeding stations, but meanwhile two new jays had gained access

to the station. These birds were brightly colored, being very different in appearance from the sooty birds who had spent the winter in this suburb of industrial Cleveland. One newcomer was given No. 315526. On March 16 one each of two pairs of Blue Jays took food from the traps to their mates waiting in the tree above. One of these was given band No. 315529. The number of the other bird was not determined as it was warned by its mate when the trap was about to be dropped.

On returning to the station, after an absence of several hours and while yet about five hundred feet away, the writer was met by a banded jay who flew down to a tree ten feet distant. This bird, though it had food in its bill, called in the same way, two rather low "jay jay" notes, as two jays have lately called for their breakfast. On arriving at the traps the day's supply of food was found entirely gone.

From March 8 to March 25 Crows up to four hundred in a flock, have been moving east along the lake shore. Two of the crows, observing the jays in the tree tops, stopped to investigate. While one crow acted as a sentinel in the usual crow fashion, the other made a deliberate and successful search for the jay's hidden supplies. Inside of five minutes sufficient reinforcements had arrived for the jays and their uninvited visitors were speedily routed, being escorted beyond vision over the tree tops by a dozen of the jays. The next morning, however, increased numbers of the crows were in complete possession; but they did not come closer than fifty yards of the traps. Noticing this the jays have since hidden their reserve rations only by burying them within the limits the crows set for themselves.

Frefuently during the winter when numbers of other birds started feeding at the traps the jays would scatter them by dashing down with imitations of various hawk cries. Usually ascribed to mischief, these imitations are used at this station only for the practical purpose of protecting their food supplies. The only effect on Starlings, however, is to make them imitate the usual jay calls. There was no real conflict between Starlings and jays as to food at the traps, the only food eaten by both being suet.

Screech Owls which live high on numerous English Sparrows attracted to the feeding station, are not given any especial attention by the jays; except when summoned by an alarm call from the flickers between whom and the owls there seems to be a dispute as to the occupancy of a certain hollow tree. Thirty-seven Blue Jays were banded between October, 1924, and March, 1925.—E. C. Hoffman. *Cleveland, Ohio.*

The Bronzed Grackles at Lakewood, Ohio, in 1925.—The Bronzed Grackles spending the spring and summer along the south shore of Lake Erie began to arrive at Lakewood, Ohio, in increasing numbers during the first week in June, the first bird being banded June 9. Their arrival coincided with increased numbers of gnats and mayflies. Of these spring and summer birds eighty-nine were banded. These birds, estimated to number eight hundred, left Lakewood about October 4.

About five hundred grackles appeared here October 5 and remained until October 25. These birds appeared to be entire strangers to traps and feeding stations and kept strictly to themselves. None were banded.

About four hundred Bronzed Grackles came to Lakewood October 27 and gradually moved eastward along the lake and along the boulevards running par-

allel with the lake, through the city, leaving November 6. These birds took several days to become acquainted with the traps and feeding stations. Three were banded.

The lowest average temperature for any October shown on the records of the Cleveland weather bureau undoubtedly influenced the above migration dates.

Returns from the ninety-two birds mentioned may indicate whether these grackles are divided into permanent groups, as their behavior seems to show.

Although some of these grackles presumably nest in this locality, the adult birds having often been observed flying off with food, no nests have been found, and returns should determine the nesting site and also their winter home.—JOHN A. BRADY AND E. C. HOFFMAN, *Lakewood, Ohio.*

The Biology Department of Milton College, under the leadership of Professor F. G. Hall, is doing an excellent work in bird banding as a part of the study course. It has been the privilege of the president of the Inland Bird Banding Association to read the thesis of Miss Beulah Margaret Lewis, for graduation in 1925 at Milton College, Milton, Wisconsin.

The thesis is in bound form of more than a hundred typewritten pages, with numerous photos for illustrations. It is a delightful book to read and shows a great amount of study, with many new and original ideas. To any one interested in bird banding, it is an excellent instruction book. We were particularly taken with the opening statement which is as follows: "What could be more absorbing for a thesis than bird banding? It draws one out of doors in the spring when the call of nature is strongest, and it furnishes pleasure the year round. Then each day brings the possibility of a rare species or the return of banded individuals. The attractiveness of bird banding is drawing the attention of large numbers of bird students, many of whom are aiding the government by means of ornithological research. Care is exercised to make it of the greatest scientific knowledge and to insure the safety and well being of the birds."

The approval and commendation of the Inland Association is being sent to Miss Lewis, also to Professor Hall to whom we believe a great deal of credit is due for the excellent assistance he is giving banding in his district.—W. I. L.

We have received "News from the Bird Banders (of the) Western Bird Banding Association, Volume I, Number 1, January, 1926." This is a mimeographed circular of ten pages on heavy, perforated paper, which records and the minutes and miscellaneous information of interest to the bird banders on the Pacific Coast. In form and contents it is a splendid suggestion for a method of preserving matter which otherwise might not become available to all of the members, and others, who may be interested in it. It is also another indication of the enthusiastic activity of those who are engaged in the bird banding work.

NOTES HERE AND THERE

Conducted by Gordon Wilson

Mr. George O. Ludcke, a former president of the Sioux City Bird Club, addressed the Minneapolis Audubon Society early last December. We would be glad to hear more about the activities in Minneapolis and St. Paul.

Dr. Albert F. Woods, president of the Maryland State University, has been appointed director of scientific work in the United States Department of Agriculture to fill the vacancy caused by the resignation of Dr. E. D. Ball.

For some years our stationery has been carrying what we believe to be an erroneous statement concerning the date of founding of the W. O. C. From the records in our possession it seems that the date of such founding is December 3, 1888, and not December 5.

We have received a leaflet entitled "A College Course for Twenty-five Cents", which announces a number of radio correspondence courses offered by the Extension Division of the University of Iowa. Among these we find a course on Iowa Birds, for which one hour of university credit is allowed. Lectures and instructions are to be given over the radio by Professor Dayton Stoner.

In *American Game*, for October, 1925, we find an article giving an historical account of the founding of the Wild Life School, at McGregor, Iowa. This has developed into an annual conference of about two weeks during August, which had its beginning in 1919, wholly as the outcome of plans arranged by Rev. George Bennett, of Iowa City. We are under the impression that, beginning with 1925, the Izaak Walton League has given some support to the conference.

In *Science* for October 30, 1925, we find an interesting article by Professor Wm. H. Powers, of South Dakota State College, on "Some Facts in the Life of Thomas Nuttall." It reviews the biographical literature on Nuttall pointing out certain erroneous statements, and concludes with a revised chronological summary of events in Nuttall's life. From this account it seems that Nuttall reached St. Louis, by the way of the Great Lakes, the Wisconsin, and Mississippi Rivers, in 1809. The ascent of the Missouri River was not begun, however, until early in January, 1811, and not December 31, 1809, as stated by Durand.

Number 1, Volume II of the *Kentucky Warbler*, a four-page, quarterly leaflet, appeared on time in January. It is published at Bowling Green under the auspices of the Kentucky Ornithological Society, and is edited by Professor Gordon Wilson. These little communiques serve to keep the members in touch with each other and stimulate interest in the affairs of their organizations. We gather from the last issue that Editor Wilson is in love with the canoe, and we are beginning to wish we were near enough to run down and join in a canoe trip with him.

We hope sometime to be able to publish a more or less complete list of the spring and summer courses in ornithology in the colleges and universities of the Middle West, perhaps a sort of directory of such courses, if it is not too bulky. There are many such opportunities for the student of birds, and the older students should be in a position to advise. We have just learned of an interesting course offered at the University of Cincinnati under the guidance of Professor Harris M. Benedict, and which runs for two weeks in June and July. During this time the class lives in the dormitories of the Ohio Military Institute, about eight miles

from Cincinnati. It is usual for the class to have three field trips and one lecture each day. Two credits in the University are given to those who complete the course by examination. Dr. Benedict will be glad to answer inquiries as to dates, fees, etc., and may be addressed in care of the University of Cincinnati.

Mr. Harold S. Peters, now of the Ohio State University, is making a special study of the group of Mallophaga, or bird lice, and would be very glad to receive such material from any of our members who may chance to come across it. The idea of co-operation has always been one of the fundamental principles of our organization. Mr. Peters says that these lice are usually found on the head, throat, breast, wings, and back, and are likely to be most common on water and shore birds. The lice may be picked up with small forceps and transferred to glass vials containing seventy per cent alcohol. It is very important that the lice from each individual bird be placed in a separate vial. The vial should then be carefully labeled with name of the bird, locality, collector, and date. Mr. Peters will be glad to supply vials to those who will be on the lookout for these specimens. Bird banders are pretty sure to find these lice in numbers, and there is a splendid opportunity here to do some co-operative work. Address Mr. Peters at 363 W. Ninth Avenue, Columbus, Ohio.

Dr. C. I. Reed, 2635 Reagan Street, Dallas, Texas, is carrying on a study of the digestive mechanism in the Great Horned Owl. He wishes to obtain live owls at about the age of six or eight weeks. If any of our readers are able to assist Dr. Reed in procuring young living specimens of this owl, he would be very glad to hear from them.

The Reverend J. M. Bates, Red Cloud, Nebraska, is one of our oldest members. In a recent letter to the retiring secretary he says: "I send my dues for 1926. I am eighty years old and cannot tell how much longer I shall think it worth while to keep up such interests, but at present I am not inclined to stop." We congratulate Mr. Bates, and wish him many more years of interest in the birds.

Dr. and Mrs. Casey A. Wood are spending the winter at Kandy, Ceylon, in further pursuance of a fascinating program of nature study, which has carried them through the West Indies, British Guiana, Australia, New Zealand, and the Fiji Islands. Dr. Wood has an elaborate article in the January-February *Condor* on airculture as it is practiced in Oriental countries.

The Cooper Ornithological Club has announced the dates for its first annual meeting, to be held in Los Angeles, California, on April 8, 9, and 10, 1926. Heretofore the Northern and Southern Divisions have held separate meetings periodically at San Francisco and Los Angeles.

Mr. Norman McClintock, the well-known cinematographic photographer of birds and animals, has recently been added to the faculty of the University of Pittsburgh. It is the University's purpose to make Mr. McClintock's lectures available to the general public.

Enid Michael contributes to *Yosemite Nature Notes* of July 28, 1925, an interesting note on "A Common Language Among Birds." One of our members, Professor L. Y. Lancaster, Teachers College, Bowling Green, Kentucky, has been investigating the same phenomenon and has had many interesting facts which seem to prove his theory.

One of our newest members, Miss Marcia B. Clay, Bristolville, Ohio, since retiring from an active life as librarian, has taken up in earnest her hobby of bird study. Her home is on the bank of a ravine which is a veritable paradise of birds. She has listed 123 species in this ravine alone. As there is no running water, or ponds, near by, this appears to be a very remarkable list. Miss Clay joined the Better Bulletin Club, by becoming an active member.

Our good friend, A. E. Shirling, Kansas City, Missouri, during the last several summers has conducted nature classes at Camp Olympus, Estes Park, Colorado, under the auspices of the State Teachers College, Greeley, Colorado. He is to offer courses in Ornithology and Nature Study again this coming summer. He regards the work as very pleasant, and reports from his students say that the courses are in every way excellent.

Mr. Walter W. Bennett, who appeared on the Kansas City program, has issued a very attractive folder, illustrated with pictures of his own taking, advertising his lectures on birds. Mr. Bennett is a good illustration of the business man who uses his spare time effectively in outdoor study.

At a meeting of the Councilors of The Federation of the Bird Clubs of New England, held February 3, 1926, the following officers were elected: Francis H. Allen, Chairman; William C. Adams, George C. Atwell, Gorham Brooks, Henry E. Childs, Arthur L. Clark, George S. Foster, Alfred O. Gross, Mrs. L. O. Ingalls, Heloise Meyer, John C. Phillips, Harry A. Reynolds, William P. Wharton, Charles L. Whittle. Many of these people are members of the W. O. C.

Miss Juliette A. Owen is eager to know something of the scientific study of the food of our common domesticated pigeons. She recalls a controversy which was waged some years ago in a St. Louis paper as to whether a pigeon eats table scraps. She has observed recently that pigeons eat anything and everything, especially the ones she herself owns.

The volume of Summarized Proceedings of the last six meetings of the American Association for the Advancement of Science, from 1921 to 1924, inclusive, was distributed early in 1926. In checking over the long list of members of the American Association we find that there are at least ninety-three W. O. C. members who also hold membership in the American Association. There are one hundred smaller societies officially associated with the American Association, among which is the Wilson Ornithological Club. The volume of Proceedings gives a list of all these societies with a brief statement of the history and objects of each. We reproduce herewith the statement which appears concerning the Wilson Ornithological Club.

"The Wilson Ornithological Club was organized December 5, 1888, at Fall River, Massachusetts, as a club to foster especially the less technical phases of ornithology, a sort of meeting-ground between the ultra-scientific and the ultra-popular. Though its membership includes ornithologists in every state in the United States and in many foreign countries, its specific field is the Middle West. With the club are affiliated The Nebraska Ornithologists' Union, The Tennessee Ornithological Society, The Iowa Ornithologists' Union, and The Kentucky Ornithological Society, live state societies fostered largely by enthusiastic Wilson Club members. It is the hope of the Wilson Ornithological Club to have ultimately associated with itself societies from all the Middle Western states. The membership on January 1, 1925, was 625. The club's organ is the quarterly WILSON

BULLETIN. The club holds its annual meetings usually in some prominent and centrally located Middle Western city, and as often as possible with those of the American Association."

For our convenient reference the following schedule of meetings of the American Association is here recorded.

1926. Philadelphia. Monday, December 27-January 1.
1927. Nashville. Monday, December 26-December 31.
1928. New York. Thursday, December 27-January 2.
1929. Des Moines (?). Friday, December 27-January 2.
1930. Cleveland (?). Monday, December 29-January 3.
1931. New Orleans (?). Monday, December 28-January 2.
1932. Chicago. Monday, December 26-December 31.

The quadrennial meetings are fixed, and rotate between Washington, New York, and Chicago. It has become a pretty well-established custom for the W. O. C. to hold its meeting in conjunction with the American Association when the latter meets in the Mississippi Valley. The attendance at the Kansas City meeting of the American Association was 1,931, which was the smallest attendance since the Toronto meeting in 1921. We are, therefore, always assured of the reduced railroad fare when we join with the A. A. A. S.

WHO'S WHO IN THE W. O. C.

Dr. Zeno P. Metcalf is professor of Zoology and Entomology in the North Carolina State College, and is also entomologist for the North Carolina Experiment Station, Raleigh, N. C.

Dr. Amon R. Shearer is a practicing physician at Mont Belvieu, Texas.

Miss Althea R. Sherman, of National, Iowa, devotes much of her time to the intensive study of bird life. Her winter months are spent chiefly in writing up results. Her most important papers have been on the Northern Flicker, the Screech Owl, the Sparrow Hawk, the Ruby-throated Hummingbird, and the House Wren. She has also done much work on the Chimney Swift and several other species, which is yet unpublished.

Professor Jesse L. Smith is superintendent of schools at Highland Park, Illinois.

Dr. W. H. Bergtold is a practicing physician of Denver, Colo.

Garfield A. Bowden is supervisor of sciences, University School, Cincinnati, Ohio.

Dr. Amos W. Butler, the author of "The Birds of Indiana", is lecturer on Sociology in the University of Indiana, at Bloomington.

Dr. Leon J. Cole is professor of Genetics in the University of Wisconsin, at Madison.

Dr. C. F. De Garis is instructor in Anatomy in Johns Hopkins University, Baltimore.

Professor C. W. G. Eifrig teaches in the Concordia Teachers College, Oak Park, Illinois.

George E. Ekblaw is assistant geologist in the Illinois State Geological Survey.

W. Elmer Ekblaw is the managing editor of *Economic Geography*, and honorary fellow in Clark University, Worcester, Mass.

Dr. Joseph Grinnell is professor of Zoology and director of the Museum of Vertebrate Zoology in the University of California.

Luther Little is a salesman for the A. M. Castle and Co., Los Angeles, Calif.

Richard N. Lobdell is professor of Biology in the Mississippi A. and M. College, Agricultural College, Mississippi.

Professor Albro D. Morrill is a member of the teaching staff of Hamilton College, Clinton, N. Y.

Professor E. L. Moseley is head of the Biology Department in the State Normal College, Bowling Green, Ohio.

Dr. T. S. Palmer is Biologist, United States Department of Agriculture, Washington, D. C. He is a specialist in the field of game legislation and conservation. Dr. Palmer has also been the very efficient secretary of the American Ornithologists' Union since 1918.

Dr. L. H. Pennington is professor of Botany in the New York State College of Forestry, Syracuse, N. Y.

Francis Harvey Pough is department manager in the Southern Acid and Sulphur Co., St. Louis, Mo.

William D. Richardson is chief chemist with Swift & Company, Chicago.

Oscar Perry Silliman is connected with the Mitchell Silliman Company, Salinas, Calif.

Bradshaw Hall Swales is honorary assistant curator in the Division of Birds, United States National Museum, Washington, D. C. He also holds the title of associate curator in the Museum of Zoology, Ann Arbor, Michigan.

Dr. Dayton Stoner is assistant professor of Zoology in the University of Iowa, Iowa City.

Dr. Alexander Wetmore is assistant secretary of the Smithsonian Institution, Washington, D. C.

Dr. Frank N. Wilson is professor of medicine in the University of Michigan, Ann Arbor.

Dr. William R. Allen is assistant professor of Zoology in the University of Kentucky, Lexington.

Rev. John Mallory Bates is a retired clergyman of Red Cloud, Nebraska.

Dr. G. Clyde Fisher is curator of visual instruction in the American Museum of Natural History, New York, and is an expert photographer, and has, we believe, the best illustrated lecture on John Burroughs extant.

Dr. F. L. Fitzpatrick, recently of the Colorado State Teachers College, is now professor of zoology in Coe College, Cedar Rapids, Iowa.

Dr. Harry Hapeman is a practicing physician of Minden, Nebraska.

Prof. Junius Henderson is professor of Natural History and curator of the Museum in the University of Colorado, Boulder. He has published papers on birds and mollusks.

Miss Lena B. Henderson is assistant professor of Botany in Rockford College, Rockford, Illinois.

Dr. David C. Hilton is a surgeon in Lincoln, Nebraska.

Noel J. Williams, formerly an instructor in Chemistry in Iowa State College, is now a farmer at Arnolds Park, Iowa.

Dr. Robt. H. Wolcott is professor and chairman of the Department of Zoology, University of Nebraska, Lincoln.

Group at the Kansas City Meeting of the W. O. C. and I. B. B. A.

PROCEEDINGS OF THE WILSON ORNITHOLOGICAL CLUB

Twelfth Annual Meeting

THE TWELFTH ANNUAL MEETING OF THE WILSON ORNITHOLOGICAL CLUB was held at Kansas City, Missouri, on Monday and Tuesday, December 28-29, 1925. The Inland Bird Banding Association met at the same time and place in conjunction with the W. O. C. The time and place of the meetings were chosen to coincide with the annual convocation of the American Association for the Advancement of Science, of which the W. O. C. is an associated organization.

The morning session on Monday was devoted to business and to discussions on ways and means of extending the usefulness of the Club. The report of the retiring Secretary, Prof. Gordon Wilson, was read and adopted after favorable comment had been made upon the number of new members secured by him during the year. This report is published below. The report of the Treasurer, Mr. Ben J. Blincoe, was presented and referred to an auditing committee composed of Mr. P. B. Coffin and Professor Robt. H. Wolcott, and was found to be correct. This report, which is appended, includes a statement of the funds subscribed by members and others early in 1925 for the purpose of liquidating certain indebtedness for publication which was incurred during or immediately after the World War.

President A. F. Ganier spoke briefly to express on behalf of the Club its pleasure in being able to meet in the western part of the territory in which it is particularly interested, and to express its appreciation of the considerable number of members who had journeyed some distance to attend the meetings. He stated that the organization is entering the thirty-eighth year of its existence full of optimism, and in the most satisfactory condition in its history; that its accomplishments during the past year had been very tangible. T. C. Stephens, editor of the WILSON BULLETIN, presented a report showing the cost of publishing the BULLETIN during the year, and touching various problems of illustration, sample copies, commission to agents, etc. It appeared that by close economy the cost of publication had exceeded only slightly the amount available for that purpose, but that various changes and improvements were impossible at present because of lack of funds.

A plan for an endowment fund, devised by Vice-President Whitney, was presented for the Club's consideration. In substance this plan provides for the creation of a trust fund by life memberships, subscriptions, and bequests. Interest from this permanent fund is to be used exclusively for support of the publications of the Club. There was not time for a full discussion of this matter, and it was referred to a committee consisting of Thos. H. Whitney, chairman, M. H. Swenk, and V. C. Bonesteel for further consideration. In order to expedite complete

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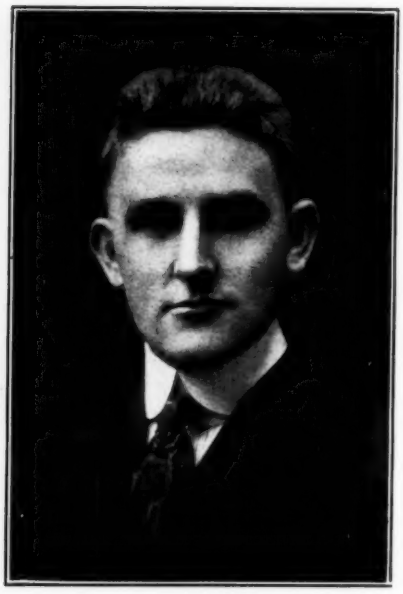
Key to Group Picture: 1. L. O. Horsky, Omaha, Neb., 2. Prof. Dayton Stoner, Iowa City, Iowa. 3. Percival Brooks Coffin, Chicago, Ill. 4. Dix Teachenor, Kansas City, Mo. 5. Lyle R. Fletcher, Lawrence, Kans. 6. B. F. Bolt, Kansas City, Mo. 7. F. C. Lincoln, Washington, D. C. 8. T. C. Stephens, Sioux City, Iowa. 9. C D. Bunker, Lawrence, Kans. 10. A. F. Ganier, Nashville, Tenn. 12. Prof. J. M. Robinson, Auburn, Ala. 13. Prof. J. W. Stack, East Lansing, Mich. 15. Mrs. T. C. Stephens, Sioux City, Iowa. 16. Wm. I. Lyon, Waukegan, Ill. 17. Dr. A. H. Cordier, Kansas City, Mo. 18. Dr. Leroy Titus Weeks, Tabor, Iowa. 19. T. E. Musselman, Quincy, Ill. 20. Prof. H. M. Kelley, Mount Vernon, Iowa. 21. Mrs. T. L. Satterthwait, Webster Grove, Mo. 22. Mrs. P. B. Coffin, Chicago, Ill. 23. Mrs. H. J. Taylor, Sioux City, Iowa. 24. Miss Anne A. Jones, Webster Grove, Mo. 25. Samuel E. Perkins III, Indianapolis, Ind.



THE RETIRING SECRETARY
GORDON WILSON

action of the Executive Committee (Officers and Councilors) was given power to adopt and ratify and put into operation a plan for establishing an endowment fund if agreement could be reached before the next annual meeting. It was also agreed that an effort should be made to dispose of the stock of old Bulletins upon some basis which would we agreeable to Dr. Jones.

Following the report of the nominating committee, consisting of T. C. Stephens, B. F. Bolt, and L. O. Horsky, the following officers were elected for the ensuing year:

President — Albert F. Ganier, Nashville, Tenn.

Vice-President — Thos. H. Whitney, Atlantic, Iowa.

Secretary—Howard K. Gloyd, Ottawa, Kansas.

Treasurer — Ben J. Blincoe, Dayton, Ohio.

Councilors—Gordon Wilson, Bowling Green, Ky.; Dix Teachenor, Kansas City, Mo.; L. O. Horsky, Omaha, Neb.; J. W. Stack, East Lansing, Mich., and J. M. Robinson, Auburn, Ala.

Professor Wilson's resignation from the secretaryship was received with regret, and with appreciation of his faithful services during the past three years.

At a meeting of the Executive Commitee, composed of the above officers, Dr. T. C. Stephens was elected editor of the WILSON BULLETIN for the year 1926.

A communication from the American Ornithologists' Union was read, which invited the Wilson Ornithological Club to join with the A. O. U. and the Cooper Ornithological Club in establishing a wild life preserve at Olney, Illinois, as a memorial to Robert Ridgway. The proposal met with favor, and Mr. Percival Brooks Coffin was named to represent the W. O. C.

The Commitee on Resolutions, composed of Dr. Leroy Titus Weeks, Professor Dayton Stoner, and Mrs. Margaret E. T. Sheldon, presented a report which was adopted at the final session. This report included the thanks of the Club to Mr. Dix Teachenor, chairman of the local commitee on arrangements, who had so carefully looked after the details of the meeting; to the officials of the Lathrop Trade School for the use of the lecture room of that building; to the Kansas City Life Insurance Company for the use of their auditorium for our evening lectures; to Mrs. M. W. Barber for her courtesy in inviting the members to her home to inspect the rare elephant folio edition of Audubon's "Birds of America"; and to the local press for its generous publicity before and during the sessions. Appreciation was also expressed to the Editor for his services in producing the thirty-seventh volume of the WILSON BULLETIN, to Mr. Ben J. Blincoe for his detailed

THE NEW SECRETARY
HOWARD K. GLOYD

and painstaking work as Treasurer, to retiring Secretary Wilson for his three years of enthusiastic service, including the preparation of the program for the Kansas City meeting, and to the President and Vice-President for their activities.

Invitations were presented from Dayton, Ohio, and Chicago, to hold the 1926 meeting in those cities. An invitation was also presented from Nashville to return there in 1927. These invitations were received with appreciation and referred to the Executive Committee for final decision.

As usual, when the Club meets with the American Association, the members were enabled to attend the sessions of other organizations in whose work they were interested, or to remain over for such meetings, and thus to learn much of scientific progress during the past year. Some members also remained over to do a bit of field work and thus tread upon ornithologically historic ground, or to visit the Kansas State University Museum, under the direction of Curator C. D. Bunker, at Lawrence. Those who remained until Thursday evening were privileged to attend the dinner of the Ecological Society of America and see several reels of motion pictures of birds and of beavers, recently made by Mr. Norman McClintock, of Pittsburgh, Pa.

The evening meeting was contributed by the W. O. C. and the I. B. B. A. especially for the general public, and was held in the Assembly Room of the handsome building of the Kansas City Life Insurance Company. This session was well attended by members and visitors. Short talks were made by the executives of the two organizations explaining the objects of each. Then came a motion picture in three reels showing the home life of the House Wren, the pictures having been made during the past summer at Cleveland, Ohio, by Mr. S. Prentiss Baldwin and Mr. T. Walter Weiseman. These pictures did not show the House Wren piercing the eggs of other birds or performing other depredations with which it has recently been charged; it was shown to be a model bird. Mr. Walter W. Bennett, of Sioux City, Iowa, then followed with a remarkable series of colored slides and motion pictures depicting "Island Bird Life" in the lake region of North Dakota. The series contained exceptionally beautiful pictures of the White Pelican, Double-crested Cormorant, Avocet, and several of the gulls. Mr. Bennett is a bird photographer of unusual ability.

Immediately following the adjournment of this session a considerable number of the members repaired to the beautiful home of Mrs. Manley W. Barber, to accept her kind invitation to inspect the elephant folio edition of Audubon's "Birds of America" which forms a part of her library of rare works. The plates

were found to be in a splendid state of preservation and were viewed with keen interest by those so fortunate as to be present. Mrs. Barber also exhibited a number of old Chinese paintings of birds which were of excellent technique.

The Annual Dinner was held at the University Club and was well attended by members of the two organizations and their friends. Dr. Leroy Titus Weeks gave a number of very enjoyable readings of his poems on birds and nature, and in a style very remindful of the late James Whitcomb Riley. Various members were then called upon for impromptu remarks. Coming as it did on the evening of the last day of the meeting, the affair drew to a fitting close the very successful and enjoyable Kansas City gathering.

The business session of the Inland Bird Banding Association was held, and the minutes and roster of officers for 1926 will be found on another page.

The general program which follows was carried out in detail, the presidents of the two organizations alternating with each other in presiding. Lack of space prohibits here the report of the discussions which followed many of the papers of the program.

THE KANSAS CITY PROGRAM

Monday, December 28, 1925

Afternoon Session 1:30 O'clock. *Auditorium of the Lathrop Trade School, Thirteenth and Central Streets.*

1. Bird Banding in Indiana. Mr. Samuel E. Perkins III, Indianapolis. 20 minutes.
2. Banding of a Colony of Bank Swallows. Professor Dayton Stoner, University of Iowa. 30 minutes. (Lantern.)
3. A Study of a Nesting of Magnolia Warblers. Mrs. Margaret Morse Nice, Norman, Oklahoma. 25 minutes. (This paper was not presented owing to the unavoidable absence of the author, but it will be published in an early number of the Bulletin.)
4. Kansas City as a Center of Early Ornithological Activity in the West. Professor Myron H. Swenk, University of Nebraska. 40 minutes.
5. The Banding of Gulls and Terns. Mr. Wm. I. Lyon, President of the Inland Bird Banding Association, Waukegan, Illinois. 30 minutes. (Lantern.)
6. Observations on the Relation of Snakes to Bird Life in Central Kansas. Prof. Howard K. Gloyd, Ottawa, Kansas. 25 minutes.

Evening Session, 8:00 O'clock. *Auditorium of the Kansas City Life Insurance Company, Armour Boulevard and Broadway.*

1. The Life History of the House Wren. Mr. S. Prentiss Baldwin and Mr. T. Walter Weisman, Cleveland, Ohio. 30 minutes. (Motion pictures.)
2. Island Bird Life. Mr. Walter W. Bennett, of the Sioux City Bird Club. 80 minutes. (Lantern and motion pictures.)

Tuesday, December 29, 1925

Morning Session 9:30 O'clock. *Auditorium of the Lathrop Trade School, Thirteenth and Central Streets.*

1. Some Observations on a Green Heron Colony. Mrs. C. I. Reed, Dallas, Texas. 25 minutes. (Lantern.)

2. Three Years of Bird Banding on a College Campus. Professor J. M. Robinson, Alabama Polytechnic Institute, Auburn, Alabama. 25 minutes.
3. Bird Banding in a College. Professor J. W. Stack, Michigan Agricultural College, East Lansing. 30 minutes. (Lantern.)
4. Plans for Banding Franklin Gulls. Professor Wm. Rowan, University of Alberta, Edmonton. 20 minutes.
5. A Mourning Dove Study. Mr. W. B. Taber, Jr., Kansas, Illinois. 20 minutes.
6. Bird Banding in Progress and Prospect. Mr. Frederick C. Lincoln, Biological Survey, Washington, D. C. 25 minutes. (Illustrated by maps.)
7. Report of the Texas District. Mr. R. A. Gilliam, Dallas, Texas. 20 minutes.

Group photograph at 12:30 o'clock.

Afternoon Session 2:00 O'clock. *Auditorium of the Lathrop Trade School, Thirteenth and Central Streets.*

1. Banding of Black Terns. Mr. Paul W. Hoffman, Milwaukee, Wisconsin. 20 minutes. (Lantern.)
2. Bird Banding in Upper Michigan. Mr. Michael J. Magee, Sault Ste. Marie, Michigan. 25 minutes. (Lantern.)
3. The Banding of Swifts and Ducks. Mr. T. E. Musselman, Quincy, Illinois. 25 minutes. (Lantern.)
4. Nesting Habits of the Great Horned Owl in Tennessee. Mr. A. F. Ganier, President, Nashville, Tennessee. 30 minutes. (Lantern.)

Evening Session and Dinner, 6:30 O'clock. *University Club, 918 Baltimore Avenue.*

1. Annual Dinner of the Wilson Ornithological Club with the Inland Bird Banding Association.
2. Poetry on Wings. Dr. Leroy Titus Weeks, Dean in Tabor College, Tabor, Iowa.
3. Informal period.

Forty-nine out-of-town visitors were registered at the Kansas City meeting. The attendance on Monday morning was about fifty; at one of the other day sessions ninety-two were counted in the room. Thirty-seven attended the dinner on Tuesday evening, while a much larger number attended the Monday evening lecture and motion picture exhibition.

The Register of Attendance at the Kansas City Meeting

From KANSAS. C. D. Bunker, and Lyle R. Fletcher, Lawrence; Mary T. Harmon, Manhattan; Mr. and Mrs. Howard K. Gloyd, Ottawa; C. L. Harris, El Dorado; Homer A. Stephens, Emporia. From MISSOURI. Mrs. Frank A. Dawes, Mrs. B. W. Ladd, Isabella J. Clarke, Alice Bovard, John A. Bryant, Dix Teachenor, Benj. F. Bolt, Myron C. Rybolt, L. B. Echals, J. L. McKee, N. Clay Harvey, Ernest W. Holmesley, of Kansas City; Anne A. Jones, Mr. and Mrs. Satterthwait, Richard C. Lange, Webster Grove; Thos. B. Tracy, Parkville; P. S. Pennington, Jr., Edgar Anderson, St. Louis. From OKLAHOMA. Frank G. Brooks, Oklahoma City; Edith R. Force, Okmulgee. From TEXAS. Dr. and Mrs. C. I. Reed, Dallas. From COLORADO. John C. Johnson, Gunnison. From NEBRASKA.

Mrs. Margaret E. T. Sheldon, Professor Robt. W. Wolcott, Professor and Mrs. Myron H. Swenk, and Miss Iva B. Swenk, Lincoln; Gladys J. Shamp, Jean Berger, Louis O. Horsky, Omaha. From IOWA. Mrs. Mary L. Bailey, Mrs. H. J. Taylor, Walter W. Bennett, Mr. and Mrs. T. C. Stephens, Sioux City; William F. Coultas, Professor Dayton Stoner, Iowa City; Professor Harry M. Kelly, Mount Vernon; Dean Leroy Titus Weeks, Tabor. From ILLINOIS. Mr. and Mrs. Percival Brooks Coffin, Chicago; Ruth Marshall, Rockford; W. I. Lyon, Waukegan; T. E. Musselman, Quincy. From INDIANA. Samuel E. Perkins III, Indianapolis. From MICHIGAN. Gertrude C. Laing, P. W. Hunt, Professor J. W. Stack, East Lansing; Professor Frank N. Blanchard, Ann Arbor. From TENNESSEE. A. F. Ganier, Nashville. From ALABAMA. Professor J. M. Robinson, Auburn. And Mr. F. C. Lincoln, Washington, D. C.

A considerable number attended the evening meeting on Monday and the dinner on Tuesday evening who did not register.

REPORT OF THE SECRETARY FOR 1925

To the Officers and Members of The Wilson Club:

I beg to submit herewith a report of my activities for the year 1925. A drive for new members has been maintained throughout the year, during which time several hundred of our standard letters of invitation have been mailed to parties fitted for membership. Other officers and members have assisted to some extent in this work and as a result I am submitting herewith a list of 81 new members to the Club. The list is composed of 64 associates, 16 actives and 1 sustaining member, distributed by states as follows: Alabama 2, Arkansas 1, Canada 3, Illinois 5, Indiana 3, Iowa 32, Kansas 1, Kentucky 4, Michigan 4, Minnesota 1, Mississippi 1, Nebraska 1, New York 3, North Carolina 1, Ohio 6, Oklahoma 2, Pennsylvania 1, South Dakota 1, Tennessee 9, Texas 2, Virginia 1, Wisconsin 1.

Those responsible for obtaining these new members are as follows: Gordon Wilson 36, T. C. Stephens 26, A. F. Ganier 4, Wm. I. Lyon 4, Lynds Jones 4, Chas. J. Spiker 2, J. M. Robinson, J. Van Tyne, Ben J. Blincoe, James Suthard, Mrs. E. F. Chilcott, R. A. Gilliam, F. C. Willard, Burtis H. Wilson, one each.

Each month, in accordance with the Club's vote of last fall, I have made a report of all receipts and expenditures to our Treasurer, as shown by his report.

Thirty-two members have come to us this year from Iowa. It will be observed, also, that our members are coming largely from our legitimate territory, the Mississippi Basin. Twenty members have come from the South, where we are still none too well represented. Our organization is growing in interest and enthusiasm throughout its range, thanks to the interest of our members. The drive for funds early in the year is a fair indication of the regard in which The Wilson Club is held by the various types of bird students who form its membership.

In closing my three years of service as Secretary, I wish to thank the officers and members and well-wishers of our orginization for the co-operation shown me and for the enthusiastic response given to all our demands and requests for help and assistance. I regard my connection with the Club as one of the high points in my life.

With the heartiest good wishes for the continued success of the W. O. C., I am,

Very cordially yours,

GORDON WILSON, *Secretary.*

REPORT OF THE TREASURER FOR 1925

Dayton, Ohio, January 24, 1926.

Receipts for 1925

Cash on hand January 1, 1925	$ 35.67	
Associate dues	345.00	
Active dues	472.00	
Sustaining dues	355.00	
Oberlin College Exchanges	48.00	
Subscriptions	29.60	
Contributions to "Better Bulletin Club"	405.89	
Contribution for cuts	25.00	
From W. E. Hoffman for reprints	6.50	
Sale of back numbers of Wilson Bulletin	48.71	
		$1,771.37
Cash in bank January 1, 1926		251.18
Total expenditure for 1925		$1,520.19

Disbursements for 1925

Secretary's office, month by month	$ 71.10	
President's circular letter in February	14.60	
Treasurer's office, printing and postage	22.20	
Printing for the Nashville meeting	11.75	
News Printing Co., balance due	574.79	
Rubber stamps for editor	2.70	
Editor's postage in 1924	8.74	
Check returned unpaid	1.50	
Freight on supply of Bulletins Oberlin to Sioux City and addressing of June Bulletins	6.52	
Addressograph plates and supplies, making stencils for mailing list, and addressing for March Bulletin	52.76	
Addressing the September Bulletin, and making corrections in mailing list	6.30	
Verstegen Printing Co., 4,000 mailing envelopes and 300 reprint order slips	32.50	
Verstegen Printing Co., March, June, and September Bulletins, including cuts	694.04	
Cost of mailing the Bulletin in 1925	20.69	
Total expenditure, 1925		$1,520.19

Respectfully submitted,

Ben J. Blincoe, *Treasurer.*

Kansas City, Mo., December 27, 1925.

The Treasurer's report has been examined and found to be correct.

P. B. Coffin, *Auditor.*

PUBLICATIONS REVIEWED

BIRDS OF MASSACHUSETTS AND OTHER NEW ENGLAND STATES. By Edward Howe Forbush. Part I. Water Birds, Marsh Birds and Shore Birds. Pages i-xxxi + 1-481. Issued by authority of the (Massachusetts) Legislature, 1925.

If the average of comprehensiveness and artistic merit of the more important bird books that have appeared during recent years could be plotted in a curve, it may safely be predicted that such a curve would be decidedly upward, not only in the taxonomic monographs, life history biographies and more elaborate group treatments but especially in the state bird lists. When the two volumes of Eaton's "Birds of New York" appeared, in 1909 and 1914, a new standard of pretentious state bird lists seemed to have been established. The recent appearance of Dawson's "Birds of California" seemed almost to reach the ultimate artistic possibility in books of this character. While the work mentioned above, of which "Birds of New York" appeared, in 1909 and 1914, a new standard of elaborate bulk of the "Birds of New York," and does not have the lavish illustration of the "Birds of California" in the opinion of the reviewer it is the peer of either of them in fundamental artistic merit and exceeds either of them in the character of the abundance, conciseness and availability of reliable and useful information about the birds treated. In other words, a new and yet higher standard has again been set in state bird books.

The present volume is the first of three that are to constitute the completed work. It deals with the water birds, while the following volumes are to deal with land birds. The sequence and nomenclature used is that of the A. O. U. Check-List and its supplements. There are detailed original descriptions of the plumages, molts and measurements of the included birds, and also concise but adequate paragraphs on the field marks, voice, haunts and habits of each, as well as a complete statement of the distribution of each form in New England and its seasonal occurrence in Massachusetts. From the standpoint of text, it would seem that nearly any ordinary inquiry regarding the birds dealt with could be found answered in these pages.

In the matter of illustration, the most striking feature is the series of thirty-three beautifully executed and admirably reproduced colored plates by Louis Agassiz Fuertes. These plates apply an artistic principle not previously used in any American bird book, in that they are without margins but go clear to the edge of the page, and bear no printed captions or explanations. The artist has been very successful in his grouping of the birds upon these plates, and their attractiveness is further enhanced by the fact that each plate is a complete picture, with a suitably colored background, thus bringing a unity to the picture that is usually lacking in colored plates of groups of birds. At the same time there is no loss in the accuracy and usefulness of the plates. In addition to the colored plates there are thirty-five pen sketches, by the author and others, interspersed in the text, and sixty-eight cuts of bird's nests and mounted specimens of the rarer or accidental species. In short, the entire content and make-up of the book appeals to the reviewer as adequate, reliable, artistic and mechanically well executed. Ornithologists of Massachusetts and the other New England states are indeed fortunate to have available such a splendid summary of the ornithological knowledge pertinent to their area.

This book is published by the State of Massachusetts, and copies may be secured by remitting five dollars to Dr. Arthur W. Gilbert, Commissioner, Massa-

chusetts Department of Agriculture, State House, Boston Massachusetts. It is safe to predict that the demand for this book will be such that it will soon be out of print, like the two preceding volumes by the same author that were also published by the state.—M. H. S.

A Distributional List of the Birds of British Columbia. By Allan Brooks and Harry S. Swarth. Pacific Coast Avifauna No. 17, Cooper Ornithological Club. September, 1925.

This is a comprehensive, and doubtless a complete and authentic, catalogue of the birds of British Columbia, the home of the senior author. The annotations concern only the status of the species treated. A glance at the hypothetical list and the list ascribed to British Columbia on unsatisfactory grounds brings a feeling of confidence in the care with which the major list has been prepared. We note an innovation in the inclusion of one or two Latin synonyms for many of the species of the list, although not a complete synonymy, of course. Heretofore the vernacular names have been regarded, in most cases, as the variables.

One colored frontispiece depicting the young and adult of the Queen Charlotte Saw-whet Owl, several half-tones, and numerous distributional maps, form the illustrative material. An extensive bibliography and index complete the book. The mechanical work is up to the standard of the California publications.—T. C. S.

British Birds. By Archibald Thorburn, F. Z. S. Longmans, Green and Co., New York. 1925. Demy 8vo. Per volume, $5.50.

This work, which is to be completed in four volumes, may be regarded as a small edition of the earlier quarto work (published in 1915) under the same title and by the same author. The earlier edition was limited to 105 copies, which were sold (at $40.00) before the prospectuses were distributed in America. The quarto edition illustrated from five to ten birds on a plate, and it contained only eighty plates. The octavo edition, on the other hand, contains one hundred and ninety-two plates, each showing from one to three birds. In spite of its smaller, though handier, size it appears probable that it will illustrate as many species. The set of four octavo volumes is priced at $21.00, and we trust that the edition is intended for general distribution.

Volume I is devoted entirely to the passerine birds, and here we become better acquainted with many species which we have long known only by name, e. g., the Stonechat, Chaffinch, Nightingale, Bullfinch, Fieldfare, Mistle Thrush, Brambling, and Song Thrush; these and one hundred others are pictured in color in the forty-eight plates of this volume. Volume II completes the treatment of the order Passeres, and also includes the owls, hawks, cormorants, herons, and bitterns. This volume pictures the Jackdaw, the Sky-lark, the Cuckoo, and many others which are merely names to most American bird students. In this volume the same number of plates illustrate only seventy-one species, which is because most of the birds of prey have a full plate.

Of course, the outstanding feature of the work under review is the artistic work of the author. None but colored illustrations are used. The plates may well be described in superlative terms. The superb delicacy of the coloring and the subdued harmony grip the attention with such subtlety that the reader wonders what elements in the artistry may explain the effect. In most of the plates the background is solid and dark in tone. Even when the sky is shown it is painted in dark shades. This method of treatment results in the absence of sharp contrasts. There is a blending of tones and a mellowness which is very pleasing to

the eye; and we are bound to say that the distinctness of the bird's pattern does not suffer in the least.

On the average about one page of text matter is presented for each species. The text, which is the same as in the quarto edition with some revision, is an informal and non-technical account, stressing sometimes the distribution, or again the nesting habits, plumage, song, or food habits, as these topics may chance to be of greater interest in the species discussed. So far as nomenclature is concerned it probably makes little difference, in the work of this kind, whether one system or another is followed. Mr. Thorburn has followed Saunders' Manual of Bristish Birds, and has not encumbered his work with trinomials. For the American students who wish merely a passing acquaintance with the British birds the present work will, we believe, definitely serve this purpose, and the work itself will prove a most delightful addition to one's ornithological library.—T. C. S.

Birds Collected and Observed During the Cruise of the Thiepval in the North Pacific, 1924. By Hamilton M. Laing, with systematic notes by P. A. Taverner. Bull. No. 40, Victoria Memorial Museum, Ottawa, Canada. November, 1925.

The route of the vessel is not made clear by the text; a map or chart showing the route and principal stops would add greatly to the interest and value of such a report. Most of the ornithological work was done apparently in the Aleutian Islands and Kamchatka. Little work was done in Japan because this government would not grant collecting permits. One hundred and twenty-five forms are treated in the list, most of which were identified from specimens taken; a few field observations are reported without attempt at close identification.—T. C. S.

Food Habits of the Vireos. By Edward A. Chapin. Department Bull. 1355, U. S. Dept. of Agriculture, November, 1925. Price 10 cents.

Ten species of vireos are discussed from the standpoint of economic value. The proportions of various foods are shown by dial charts and shaded diagrams. It is a valuable source of information.—T. C. S.

Food of American Phalaropes, Avocets, and Stilts. By Alexander Wetmore. Department Bull. 1359, U. S. Dept. of Agriculture. October, 1925. Price not given.

This bulletin treats of the food habits of the three species of phalaropes, the Avocet, and the Black-necked Stilt. It contains three full-page, black and white inserted plates from paintings by E. L. Poole. The bulletin is a useful source of information.—T. C. S.

Cornell Rural School Leaflet. Edited by Dr. E. Laurence Palmer. Published by the New York College of Agriculture, Ithaca, N. Y.

This periodical is devoted to nature study in general, and covers the ground in a most admirable way. We do not know of anything else like it. The number which has just come to hand (November, 1925) is devoted to mammals, and is well illustrated with animal pictures. The issue for March, 1921, was devoted to birds; and in the issue for September, 1922, we find an article on winter birds' nests, with a key by Dr. A. A. Allen for their identification. The only criticism we might offer is that much of the text material is anonymous, except as we may inferentially assign it to the editor, which, of course, is neither safe nor scientific. We submit that the editor should not withhold his name from contributions through a sense of modesty.—T. C. S.

THE LAND VERTEBRATE COMMUNITIES OF WESTERN LEELANAU COUNTY, MICHIGAN, WITH AN ANNOTATED LIST OF THE MAMMALS OF THE COUNTY. By Robert Torrens Hatt. Papers Mich. Acad. Sci. Arts & Let., III, 1923.

A survey of the ecological communities of the area with special reference to the land vertebrates, including birds.—T. C. S.

We have received a reprint of Mrs. Nice's article on "Extension of Range of the Robin and Arkansas Kingbird in Oklahoma" (*Auk*, XLI, October, 1924), in which there is a reported a westward movement of the Robin, and an eastward movement of the Arkansas Kingbird.

The January-February, 1926, number of the *American Naturalist* contains a lengthy historical and descriptive account of fishing with the Cormorant in China, by Dr. E. W. Gudger. The article is accompanied by sixteen half-tone illustrations, most of which are reproductions of ancient drawings. The earliest historical account of Cormorant fishing in China, so far as this author has discovered, dates back to the thirteenth century. Much interesting information concerning the habits of these birds is here presented.

The *Biological Bulletin* for January, 1926, contains an article entitled "Fauna of Penikese Island, 1923", edited by R. E. Coker. This paper contains a short list of twenty-nine species of birds which were found on this island in 1923. From the fact that one species is listed as the "Eve Swallow?" without the accompanying scientific name, although the scientific name is given in the other cases, we surmise that the Editor was unable to be certain just what an "Eve Swallow?" is, and therefore would not risk attaching a scientific name. Reasoning thus, we also wonder whether the other identifications were made by persons who were sufficiently familiar with birds to make the list valuable.

Penikese Island, in the Elizabeth Island group in Buzzard's Bay, is known in biological annals because of the establishment there in 1873 of a field laboratory, with which the great Louis Agassiz was connected. This laboratory is regarded as the forerunner of the present Marine Biological Laboratory at Woods Hole. To celebrate the fiftieth anniversary of the founding of the Agassiz laboratory a group of botanists and zoologists, in 1923, undertook a biological reconnaissance of the old island. The bird list is annotated by such terms as "few", "rare", "one pair", etc. Three terns are listed, but no census was attempted. We suspect that the list can have little value.—T. C. S.

Dr. Alvin R. Cahn, of the University of Illinois, contributes a most interesting article on "The Migration of Animals" in the *American Naturalist* for November-December, 1925 (pp. 539-556). After reviewing the existing theories which aim to explain the cause of migration the author concludes that, "Not food nor temperature nor wind nor length of day explain migration *unless there is an internal mechanism upon which they can operate.*" "The animal body is a complex of regulatory mechanisms which regulate the body activities of the animal and, through these, may regulate the distribution of the species."

After pointing out that the animal regulates or adjusts itself to external changes the author reasons that similar regulatory movements may result from internal physiological changes. He then sets about to show the cause of certain

internal periodic changes which are coincident with migration in many animals. Discussing then the periodic activity of the sex glands, and their effects upon secondary sexual characters, the author inquires, "Since secondary sexual characters, which are ordinarily considered as being *physical* changes in the animal, are admittedly stimulated or repressed by gonad activity or inactivity, is it not conceivable that migration, a *behavior* change at the same time, is likewise an expression of gonad activity?"

Certain domesticated animals exhibit a periodic tendency to roam during the rutting period. Removal of the ovaries eliminates this roaming tendency, because, thinks the author, this operation prevents the formation of certain hormones in the corpora lutea of the ovary; and the presence of these hormones normally causes a certain physiological imbalance, which accounts for the roaming activity. So, "the singing of the male bird is characteristic of the spring migration and the period following. Why does he sing? Is he happy? Probably he is no happier than he will be a little later in the season when he is silent. His metabolic processes are speeded up by the activity of his reproductive hormones and the result finds expression in song as in other species it may find expression in color or plumage modifications or odd actions, as the dance of the prairie chicken and the drumming of the grouse."

The big waves of bird migration are practically independent of the weather; and the same species occur quite regularly in the same waves, or on a regular schedule. These facts suggest an internal rather than an external cause. "Non-migratory species are such because the degree of physiological change due to the activities of the gonads is insufficient to throw them out of harmony with the environment: their range of tolerance is greater." Non-migratory species, such as the English Sparrow and certain woodpeckers, do not exhibit secondary sexual characters in any marked degree. The author believes also that "specific differences are more than a matter of color of a feather or of number of primaries or length of toe. I believe that species are physiologically and perhaps cytologically different."

To sum it up we understand Dr. Cahn's proposition to be something like this: migration is caused by the elaboration of certain hormones during the periodic activity of the gonads, which set up a physiological imbalance, to which the organism attempts, automatically, to adjust itself by bodily movements.

The regularity in the path of migration is probably not explained by this theory; neither is it clear that the return migration in the fall is explained. The theory here outlined is, of course, contradictory to previous theories which are based upon heredity as a causal factor in migration.

Incidentally, the author explains certain other forms of bird behavior in terms of tropisms. For instance, the breeding bird has entered into a new physiological state, different from before. During the process of nest-building, and with the advent of the eggs, the female bird becomes positively thigmotactic, i. e., responds favorably to surface contact. Thigmotaxis is one of the well-known bodily responses in the lower organisms, but has not been often applied in explaining the behavior in higher animals. We may have opened up here a new line of investigation in which the experimental method may be successfully employed. This paper is one of the most important recent contributions in ornithological literature, insofar as it applies to birds.—T. C. S.

TO OUR CONTRIBUTORS

Our members are urged to submit articles for publication in the BULLETIN Short items are desired for the department of General Notes, as well as longer contributions, especially pertaining to life-history, migration, ecology, behavior, song, economic ornithology, field equipment and methods, etc. Local faunal lists are also desired, but they should be annotated, at least briefly, and should be based upon sufficient study to be reasonably complete. Authors are asked to include the common name, the scientific name (from the A. O. U. check-list), and annotations, and they should be arranged in this order. The annotations should include explicit data concerning unusual species. Omit serial numbering.

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The title should be carefully constructed so as to indicate most clearly the nature of the subject matter of the contribution. Where the paper deals with a single species it is desirable to include in the title both the common and the scientific names, or, to include the scientific name in the introductory paragraph. Contributors are requested to mark at the top of the first page of the manuscript the number of words contained. This will save the editor's time and will be appreciated.

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Annual Meetings of the Wilson Ornithological Club

	Retiring President
1914—Chicago. February 5. Chicago Academy of Sciences.	
1914—Chicago. December 29-30. New Morrison Hotel	T. C. Stephens
1915—Columbus. December 28-29. With the A. A. A. S.	T. C. Stephens
1916—Chicago. December 27-28. New Morrison Hotel	T. C. Stephens
1917—Pittsburgh. January 1-2, 1918. With the A. A. A. S.	W. F. Henninger
1918—No meeting on account of the exigencies of war	M. H. Swenk
1919—St. Louis. December 29-30. With the A. A. A. S.	M. H. Swenk
1920—Chicago. December 27-28. With the A. A. A. S.	R. M. Strong
1921—Chicago. December 26-27. The Field Museum	R. M. Strong
1922—Chicago. October 26	T. L. Hankinson
1923—Cincinnati. Dec. 31-Jan. 1, 1924. With the A. A. A. S.	T. L. Hankinson
1924—Nashville. November 28-29-30. Peabody College	A. F. Ganier
1925—Kansas City. December 28-29. With the A. A. A. S.	A. F. Ganier